

C h i l d I n f o

Consolidated Assessment Report

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Executive Summary

An assessment of ChildInfo in the context of monitoring for development by UNICEF and the UN

Background

UNICEF is committed to promoting and monitoring progress on the Medium Term Strategic Plan (MTSP) targets, the World Fit for Children (WFFC) and the Millennium Development Goals (MDG). The agency has extensive monitoring experience at both the national and global level, derived primarily from tracking progress through the 1990s on the World Summit for Children goals, including the development of relevant tools, such as the Multiple Indicator Cluster Surveys.

With its monitoring experience, and with more than one-third of the 48 indicators for monitoring the MDGs directly related to children, UNICEF is uniquely placed to provide support to the UN system in monitoring the MDGs, and the Executive Director has recently made such an offer to the Secretary General.

The critical area for monitoring is at country level. This is where the data used at regional and global levels are created, and it is the level at which the members of the United Nations have committed themselves to achieving the WFFC and MDG goals. Moreover, it is at the country level, and in areas within, that the battle to achieve the goals will play out. In this context, monitoring at country level will not only report on progress, it must also be used to stimulate and guide interventions and programmes to accelerate progress towards the goals.

In strengthening monitoring infrastructures, there are several key components to consider, such as obtaining relevant data, their assessment and analysis, and the use of these data in reporting on and stimulating progress - and there are particular tools that can substantially support and facilitate. One such tool is household surveys; these can obtain quality data at reasonable cost on many of the key indicators. UNICEF has developed its expertise in this area through development and implementations of the MICS. Another important tool is a software package to ease the organization of data and their display through tables, charts and maps. This package is needed not only to facilitate the work of the data gatherers, but also to simplify and promote use of the data by policy and programme staff, as well as by civil society with particular attention to use of the data in advocacy.

As in the case of household surveys (MICS), UNICEF has developed such a software package focused on use at country level - named ChildInfo, which has other derived, but very closely related versions, such as DevInfo, TanInfo, BenInfo and MyInfo. In the task of building an effective monitoring infrastructure in UNICEF, and also in the UN as part of the MDGs, ChildInfo can play a major facilitating role. At the same time, information on the scope, performance and relevance of ChildInfo, particularly in relation to its ability to function well in a

worldwide monitoring system, was unknown. Given this situation, and the need to quickly resolve if ChildInfo could play a role in supporting the UN monitoring of the MDGs at country level, the Executive Director approved a rapid assessment of ChildInfo.

Assessment process

In order to facilitate the assessment of ChildInfo, the work was divided into four major components, which were subsequently reviewed together to provide an integrated set of findings and conclusions. The major components are as follows.

- Survey on use of ChildInfo at country level
- Institutional assessment of Community Systems Foundation (CSF)
- Contractual assessment
- Technical evaluation of ChildInfo

While the current assessment draws on earlier work done by the Evaluation Office, the main assessment work was done between October 3 and the end of November. The survey of ChildInfo use is aimed at determining the Country Offices, Country Teams, Governments and others that are utilizing ChildInfo.

CSF is the organization that created ChildInfo and also provides the main support to the software's implementation and adaptation at country level. Hence an understanding of the performance and capacity of CSF is critical to any assessment of ChildInfo functionality. In addition, CSF supports ChildInfo through a variety of contracts with UNICEF that have some unusual aspects, and costs are an important component of any assessment.

The technical evaluation focuses on the structure and functioning of the software.

Findings

The methodologies and findings of the major components of the assessment are provided in annexes. The purpose of this section is to summarize these findings, which are presented by each of the major assessment components listed above.

Assessment of use of ChildInfo in country (Annex 1)

The assessment of use of ChildInfo in country divides the use by UNICEF Country Office (CO), UN Country Team, Government, and other national groups. Although over 80 countries say they have ChildInfo, only a little over half (44) have developed a country database. More governments use ChildInfo than do UN Country Teams. Not surprisingly given the recent implementation of ChildInfo in most COs, its use is often limited to a small unit, such as the planning, monitoring and evaluation unit. Other sources, including a small phone survey of countries making more extensive use of ChildInfo, indicate that availability of experienced monitoring and evaluation (M&E) staff is a concern, particularly in smaller offices. The findings are summarized in the following table.

<i>Assessment of use of ChildInfo in country</i>	
Pros	Cons
<ul style="list-style-type: none"> • 44 UNICEF Country Offices (27%) use ChildInfo, 40 more (25%) have initiated use • 23 governments use ChildInfo 	<ul style="list-style-type: none"> • Few staff use ChildInfo in Country Offices (CO) and the databases are small, mostly less than 4MBs • Only 10 UN Country Teams use ChildInfo • Effective use of ChildInfo limited in CO by resources, particularly expertise of M&E staff, also concern about additional demands that may be made through UN commitment

Institutional and contractual assessments (Annexes 2 and 3)

The institutional assessment describes a small non-profit NGO that has gone out of its way to develop and support use of ChildInfo at country level. CSF has had to use its own money to overcome delays in contracts and last minute changes by country offices of ChildInfo related tasks. The majority of total CSF funding comes from the ChildInfo contracts with UNICEF and the NGO operates with a very small staff, with software and help desk tasks contracted out to an Indian company. At the same time, CSF is very dependent on one person. If this person were incapacitated in some way, the support provided to ChildInfo by CSF would be severely affected. With this minimal infrastructure the capacity of CSF to meet major increases in ChildInfo work is problematic.

<i>Institutional and contractual assessments</i>	
Pros	Cons
Small NGO that has done good work and gone out of its way to develop and support use of ChildInfo at country level	<ul style="list-style-type: none"> • CSF very dependent on one person • Depends on software company subcontract • UNICEF mechanism for contracting with CSF is problematic for both CSF and UNICEF • Capacity of CSF to meet larger needs in use of ChildInfo is uncertain.

Technical evaluation (Annex 4)

The technical assessment found ChildInfo works well within the present limited installed base. However, if it is to be used more widely, across UNICEF Country Offices, UN Country Teams, as well as in Government, changes need to be made to the software, help desk and ChildInfo support structures. For example, the software is individually customized for specific country users. This could be improved through the development of software modules that facilitate this change by others than CSF. Another example is the creation of a comprehensive training packages to support capacity building in use of ChildInfo.

Technical assessment	
Pros	Cons
CI works well within present limited installed base, and is a software package that has met a demand for better organization and display of data at country level	Wider use of CI will require changes, including: <ul style="list-style-type: none"> • Indicator consistency/linking • Front adaptation module • Comprehensive training package • Help desk • Revision of manuals • Data admin module

Conclusions

ChildInfo is performing well in its present context, but its wider deployment in the near future will require changes to the package and its support. CSF has provided good support in the development and use of ChildInfo and has shown considerable commitment in helping UNICEF implement ChildInfo at country level. But CSF's capacity to support the wider use of ChildInfo is a concern, which has to be resolved for the future; and contractual arrangements also need revision.

In moving forward, the scope of the work ahead needs to be clarified with UNICEF field offices, before discussion with UN agencies on the support of ChildInfo to be provided in relation to MDG monitoring. In parallel, UNICEF M&E capacity to meet monitoring challenges should be strengthened.

ANNEX 1: Use of ChildInfo in Country Offices

Assessed by UNICEF's Division of Policy and Planning

16 December 2002 (updated version)

This report presents the results drawn from information gathered during the period of 29 October through 16 December 2002, primarily from the ChildInfo questionnaire sent to Country Offices and Regional Offices. The next section provides a brief description of the methodology used, before reporting on the results.

METHODOLOGY

Community Systems Foundation (CSF) and the Evaluation Office provided a list of 66 offices¹ currently involved with ChildInfo. A questionnaire was sent to these Country Offices via email. Of these, 60 replied. 39 additional responses were received from a variety of sources including: offices which were not on our original list of recipients; presentations given at the Regional Monitoring and Evaluation (M&E) Officer's meeting held earlier this year, and personal knowledge of the offices concerned. This brought the total responses to 99.

Questionnaire and other source data were entered into a spreadsheet table and all tabulations included in this report are derived from this database.

RESULTS

A. Global

From a total of 162 Country Offices (CO), about 51% (or 84 COs) are either using ChildInfo (CI) or have initiated using CI.² Of these 84 countries over half (44) use CI, with the remainder having initiated use. In a majority of these 84 countries, governments were interested in CI and involved in the process of establishing CI. In some cases, the management of CI had been handed over to the governments.

Additional Information on usage of CI

¹ Operation Lifeline Sudan was excluded in the previous report.

² For the purposes of this report, we define 'Using ChildInfo' as any country with a database (information was gathered through (a) questionnaire, (b) correspondence or (c) hard evidence). 'Initiated use' is defined by any country that has started the establishment of ChildInfo (based on (a) expended monetary or human resources by the country and/or (b) indicated through comments by COs or ROs).

In order to gain a more detailed understanding of actual CI usage we decided to contact a number of offices known to be users. The following countries were selected: Benin, Brazil, Iran, Mozambique, Pakistan and the Philippines. A list of questions was developed and distributed to the offices concerned. All but one country (Pakistan) provided a response either by email, telephone (representatives from DPP and ITD participated in the telephone conversations) or both. The main points are summarised below:

Prior to using CI offices used Excel worksheets, Word documents and hard copy reports. Data was dispersed. CI was seen as an improvement over the dispersed method of data collection mentioned above which in addition provided the useful capability of producing presentation materials directly from the data without having to re-key the information.

CI is typically the responsibility of the Planning, Monitoring and Evaluation (PME) section even though this is not always the case (e.g., Philippines where the responsibility is with Communications). Offices had identified CI focal points and all but one had also established backup focal points.

In most offices CI was used almost exclusively by the PME (or other responsible) section. It was used to produce presentation materials often stored in the CI Gallery for use by others. The PME section also used CI to produce their own materials (e.g., "The Situation of Brazilian Children and Adolescence"). Other sections (e.g., programme and communications) had frequently been trained in CI but tended to request PME to produce maps if they required them rather than to access the CI database directly. Reasons for non-use of the CI were given as the following: lack of interest in monitoring, data collection and analysis; database not available on LAN; server crashes (particularly for CI version 2.0); lack of a clear signal from NYHQ that CI was official software to be used by all.

A number of offices noted that the existence of the CI tool had focused attention on monitoring activities and key indicators in a common database and had enabled progress to be made on obtaining data. This might not otherwise have been possible. In addition to monitoring the key indicators, a number of offices were interested in using CI for programme monitoring purposes. For instance, they wanted to use CI to create a visual presentation of UNICEF activities and expenditures.

Difficulties with maintaining CI were largely due to the time that it took to co-ordinate and manage data. Most data was obtained from governments. Therefore, UNICEF did not attempt to assess the quality of this data.

In some of the countries, other agencies had shown an interest in using CI (e.g. within the UNDAF, CCA, CT context) but there was sensitivity about UNICEF pushing CI. These offices felt it would be more appropriate for NYHQ to work with UNDGO and the Resident Co-ordinators to use a CI product as a corporate tool for monitoring key indicators.

Most offices had placed the priority on establishing CI with government counterparts rather than with UNICEF staff because they wanted to stimulate government ownership and build government capacity. They also wanted to release UNICEF from the burden of having to enter

essentially government data into the CI database. This was partly because they did not have enough resources to expand CI on a large-scale.

It was unclear how the different locations share data and what mechanism, if any, is used to enable this sharing.

All offices had interacted with Community Systems Foundation (CSF). Most were satisfied with the training and helpdesk, although there were some difficulties in communicating with non-English speaking offices. Several offices mentioned that customised versions were not delivered on time. A number of offices also pointed out that translation of training materials, user documentation and the CI interface were inadequate.

B. Countries and Regions

Data on country use of CI by region and category of use are provided for all 162 UNICEF Country Offices in the following table. An accompanying world map provides an alternative picture of country usage.

Table B.1: Count of CI usage by Region

Region	Using	Not using	Activities initiated	Did not receive questionnaire	Total
CEE/CIS		1		26	27
EAP	7	1	5	13	26
ESA	17		4		21
MENA	7	4	9	1	21
SA	8				8
TACR		15	19	1	35
WCAR	5		3	16	24
Total	44	21	40	57	162
<i>Percent (%) of global usage</i>	<i>27</i>	<i>13</i>	<i>25</i>	<i>35</i>	<i>100</i>

C. Questionnaire Responses

The remainder of the report is derived from the 99 responses received. The structure used in the following first lists the question, then provides results in table and/or in text format. Unless otherwise stated, the numbers in the following tables refer to number of countries in each category.

1. Country Office use

a) *How is data entry done: By office staff? By others? If so, by whom. Contracted out? If so, by whom.*

Table 1.1: CO Data entry

Mode of Entry	Selected 'Yes'
Office	32
Other	26
Contracted out	9

Note: More than one mode could be selected by a CO.

The mode of entry was more or less evenly split between the UNICEF Office and/or Other (usually governments). A small group of offices (9) contracted out the data entry.

b) Last month, approximately how many Country Office staff have used CI to produce: Tables or charts? Maps?

Table 1.2: CO Usage of Tables, Charts and Maps

Number of staff using CI to produce:	0	1-2	3-9	10+
Tables/charts	23	19	7	3
Maps	22	19	10	2

Of the 52 replies, 44% of the staff did not produce any tables/charts or maps in the last month. In the remaining offices, tables/charts or maps were produced primarily by a few staff (1 to 2).

c) How many indicators in total are there in CO CI databases? (Please indicate only the number of indicators that are specific to your country.)

Table 1.3: CO Database

Numbers of indicators		
1-100	101-200	+200
20	7	8

The majority of the COs had less than 100 indicators in their database. Numbers of indicators ranged between 13 and 371.

d) What is the total size of these CI databases (in Megabytes)?

Of the 47 replies, 11 offices had databases larger than 4 MBs with the largest being 180 MBs. Most databases (25) were between 1 MB and 4 MBs.

e) Do these CI databases include a set of indicators for: World Summit for Children (WSC)? Medium Term Strategic Plan (MTSP)? Millennium Development Goals (MDG)?

Table 1.4: Key Indicators

Set of Indicators	Use set
WSC	49
MTSP	34
MDG	36

Note: More than one set could be selected by a CO.

2. UN Country Team - Common Country Assessment (CCA) databases

a) Does the UN Country Team use CI for the CCA and UN Development Assistance Framework (DAF) process? If Yes, go to Question 2b. If No, go to Question 3.

Ten use CI: Benin, Burundi, China, Eritrea, the Gambia, India, Liberia, Myanmar, Nepal, and the Pacific (Fiji).

b) *How is data entry done: By office staff? By others? If so, by whom. Contracted out? If so, by whom. (More than one mode could be selected.)*

Table 2.1: CO Data entry

Mode of Entry	Selected 'Yes'
Office	5
Other	4
Contracted out	2

Most of the UN Country Team (CT) entry was done by Office and/or Other (usually a consultant).

c) *How many indicators in total are there in the UN CCA specific CI databases?*

Table 2.2: UN CT Database

Numbers of indicators		
1-100	101-200	+200
3	1	5

The number of indicators vary between 46 and 483. Six databases have over 100 indicators.

d) *What is the total size of these CI databases (in Megabytes)?*

The size of the databases are between 1.5 and 347 MBs. Four of these 7 databases are between 1 MB and 4 MBs.

e) *Do these CI databases include: MDG indicators?*

Seven of 9 COs said their database contained MDG indicators.

3. Government

a) *Does the Government use CI ? If Yes, go to Question 3b. If No, go to Question 4.*

Twenty-three governments use CI.

b) *How many indicators in total are there in the Government CI databases ?*

Table 3.1: Government Database

Numbers of indicators		
1-100	101-200	+200
6	3	7

The number of indicators vary between 25 and 437. The majority (10) of the 16 government databases use over 100 indicators (almost double that of the UN Country Teams).

c) *What is the approximate total size of these CI databases (in Megabytes)?*

The sizes of the databases were between 0.4 MB and 35 MBs. Six are between 1 MB to 4 MBs.

4. NGOs/Institutions

a) *Do any non-governmental organisations (NGOs) or institutions use CI? Yes, go to Question 4b. No, go to Question 5.*

Nine COs indicated that NGOs/Institutions use CI.

b) *How many NGOs use CI?*

Number of NGOs per country using CI vary between 1 and 10.

5. Now, going back to the Country Office use of CI, to what sub-national area level does the office have maps in CI:

Sub-national level (one level down from national)? Sub-sub-national level (two levels down from national)? Sub-sub-sub-national (three levels down from national)?

Table 5.1: Levels of Mapping

Level	Responses
Sub-national level	61
Sub-sub-national	54
Sub-sub-sub-national	27

Note: More than one level could be selected.

6. Was the cost of the digital maps, which were created for and contained in CI, paid by the Country Office?

If Yes: What was the production cost? If No: The cost was covered by?

22 COs paid for the maps and 28 did not. When the response was 'No,' the map cost was borne by either the RO or the governments.

The map creation costs vary between \$200 and \$40,000. Most fell into the \$1,000 to \$5,000 range. 28 offices reported a zero cost.

7. How many people were trained to use CI and at what cost: (Number of people trained for CO and UN CT.)

Table 7.1: Number of People Trained

Region	UNICEF Country Office	UN Country Teams
CEE/CIS	0	0
EAP	76	322
ESA	190	95
MENA	55	8
SA	145	181
TACR	8	0
WCAR	69	45
<i>Total</i>	<i>543</i>	<i>651</i>

Training costs for the COs vary between \$500 and \$23,000 and for the UN CT the range was about \$1,100 to \$30,000. Most of the costs fall between \$500 and \$5,000.³

8. Is there someone in the Country Office who can train others (such as in the UN Country Team or in Government) in the use of CI?

45 Country Offices have at least one trainer available.⁴

9. During 2002, what resources have been expended in use and support of CI?

In money terms (US\$) and in person terms (please estimate in terms of person-week).

54 COs expended resources on CI from \$523 to \$57,900. Most (47) offices spent less than \$20,000 from their own resources. Other sources of funding include governments, ROs and UN agencies. A majority of offices (36) used less than 10 person-weeks.

³ This indicated range refers to the CO cost. There were only two values for the UN CT costs (\$1,100 and \$30,000).

⁴ The fact that they have trainers does not mean they are presently CI users (as in the case of Somalia).

ANNEX A: Using ChildInfo

Afghanistan
Angola
Bangladesh
Benin
Bhutan
Botswana
Burundi
Cambodia
China
Comoros (Indian Ocean Area Office)
Egypt
Eritrea
Ethiopia
Ghana
India
Indonesia
Iran
Iraq
Kenya
Lebanon
Liberia
Madagascar, Rep of (Indian Ocean Area Office)
Malawi
Maldives
Mauritania
Mauritius (Indian Ocean Area Office)
Mongolia
Mozambique
Myanmar
Namibia
Nepal
Niger
Oman
Pakistan
Philippines
Rwanda
South Africa
Sri Lanka
Syrian Arab Rep
Tanzania, United Rep of
Thailand
Yemen, Rep of
Zambia
Zimbabwe

ANNEX B: Not Using CI

Antigua & Barbuda (Caribbean Area Office)
Barbados (Caribbean Area Office)
Bolivia
British Virgin Is, The (Caribbean Area Office)
Colombia
Dominica (Caribbean Area Office)
Ecuador
Grenada (Caribbean Area Office)
Guyana
Kuwait (Gulf Area Office)
Libyan Arab Jamahiriyya
Malaysia
Montserrat (Caribbean Area Office)
Morocco
Qatar (Gulf Area Office)
St. Kitts and Nevis (Caribbean Area Office)
St. Lucia (Caribbean Area Office)
St. Vincent and The Grenadines (Caribbean Area Office)
Suriname (Caribbean Area Office)
Trinidad and Tobago (Caribbean Area Office)
Turkmenistan

ANNEX C: Initiated Using ChildInfo

Algeria
Argentina
Bahrain (Gulf Area Office)
Belize
Brazil
Chile
Costa Rica
Cuba
Djibouti
Dominican Rep
El Salvador
Fiji (Pacific)
Gambia, The
Guatemala
Haiti
Honduras
Jamaica
Jordan
Korea, D.P.R.
Lao, P.D.R.
Lesotho
Mexico
Nicaragua
Nigeria
Operation Lifeline Sudan
Panama
Papua New Guinea
Paraguay
Peru
Saudi Arabia (Gulf Area Office)
Sierra Leone
Somalia
Sudan
Swaziland
Tunisia
Uganda
United Arab Emirates (Gulf Area Office)
Uruguay
Venezuela
Viet Nam

ANNEX D: Did Not Receive Questionnaire

Albania	Lithuania
Armenia	Macedonia, TFYR
Azerbaijan	Mali, Rep of
Belarus	Marshall Is
Bosnia & Herzegovina	Micronesia, Fed States of
Bulgaria	Moldova, Rep of
Burkina Faso	Niue
Cameroon	Palau
Cape Verde	Poland
Central African Rep	Romania
Chad	Russian Federation
Congo, DRC	Samoa
Congo, Rep of	Sao Tome & Principe
Cook Is	Senegal
Cote D'Ivoire	Slovakia
Croatia	Solomon Is
Czech Rep	Tajikstan
East Timor	Togo
Equatorial Guinea	Tokelau
Estonia	Tonga
Gabon	Turkey
Georgia	Turks and Calcos Is (Caribbean Area Office)
Guinea	Tuvalu
Guinea Bissau	Ukraine
Hungary	Uzbekistan
Kazakstan	Vanuatu
Kirbati, Rep of	West Bank & Gaza
Kyrgyzstan	Yugoslavia, Rep of
Latvia	

ANNEX 2: Institutional Organization Assessment of Community Systems Foundation

Assessed by Universalialia for UNICEF's Evaluation Office

29 November 2002

E x e c u t i v e S u m m a r y

Over the last 8 years, UNICEF has contracted the Community Systems Foundation (CSF) to develop and maintain a database software known as ChildInfo and to provide the technical support and training in the use of this software. UNICEF decided to conduct an organizational assessment of CSF to ascertain that the Community Systems Foundation (CSF) has the competence and ability to provide further development and support for the use of the software, should there be a worldwide demand for ChildInfo.

Community Systems Foundation

CSF was created in Ann Arbor, Michigan in 1963 as a non-profit NGO. It turned to international activities in 1973 when it began working on nutrition data analysis issues in developing countries through a contract with USAID. Since that time, CSF has handled more than 26 multi year projects, primarily in the nutrition field along with a growing portfolio in evaluation of primarily health and nutrition projects. CSF involvement with began with a small project with the New Delhi office of UNICEF in 1994. CSF projects with UNICEF and latterly on a small scale with UNDP have grown rapidly to become the main program activity of CSF in the last 8 years.

Organizational Performance

1. Strategic and operational leadership: As a small NGO, CSF has attracted very senior and committed staff and associates to serve on its Board and provide ongoing input to programme activities. However, there is no formal strategic plan and limited formal organizational procedures. This has worked to date; given the small nature of the CSF program and the contractor driven project nature of CSF's work.

There is only two full time professional staff (the President and the Executive Director). Leadership has been collegial between these two members and the Board, providing a very cohesive but rather narrow constituency.

2. Organizational Structure: The most notable organizational change was the move to address ChildInfo needs by locating the Executive Director in New Delhi and to contract out most of the ChildInfo software and help desk servicing activities to an Indian firm, Logiciel.

3. Human Resources: CSF has access to a pool of often highly experienced associates who are willing to work on assignments of limited duration for CSF. The core associates, often employed in the University of Michigan, demonstrate a high degree of knowledge of and commitment to CSF.

As ChildInfo and DevInfo projects required some different types of skills and more ongoing routine work. CSF has chosen to out source some of this activity while maintaining a close daily monitoring of

this outsourced work. Some Associates are employed for extensive periods each year for training and they have developed expertise through a number of training courses run by each consultant.

4. Revenue Generation and Financial Management: CSF revenue exceeded one million dollars for the first time in 2001 with nearly a tripling of revenue in the period 2000-2002. CSF has a very narrow funding base with dependence largely on USAID between 1973 and 1994 and then on UNICEF and now small amounts from UNDP since then. While CSF reserve funds of slightly over \$600,000 should be adequate for a program of this size, delays in payment from UN organizations provide no margin and CSF requires additional upfront payments and a more reliable funding commitment to operate efficiently.

5. Partnership and inter-organizational linkages: CSF has limited links with other development-oriented organizations that have IT capability in developing countries. It does have some links with other IT organizations that can be a source of information on new technology developments.

Organizational Performance

6. Effectiveness: While there has been no formal evaluation of CSF, the fact that donors have continued to fund new projects with CSF over time is evidence that donors have judged that CSF is effective. Future funding from the UN for a broader program should include the setting of concrete milestones and objectively verifiable indicators to measure outputs, outcomes and achievement of program objectives.

7. Efficiency: CSF is a remarkably lean organization. All staff are on contract; the facilities in Ann Arbor are inexpensive and it has no office facilities in New Delhi. Contracting out support services to an Indian firm is much cheaper in terms of manpower costs and management complexity than if CSF developed its own software development servicing capabilities.

8. Relevance: CSF's mission and expertise in data management for social objectives is an area of growing importance. The development of a global database will still require the type of national assistance CSF has provided to date in developing database profiles and mapping of data in ways that will increase the use of such databases.

9. Financial Viability: CSF has demonstrated an ability to financially manage its activities without going deeply into debt over a number of decades. By putting all staff on contract and by selling the CSF property in Ann Arbor to increase reserves. It has almost eliminated fixed costs. Therefore CSF has a very minimal downsize risk.

Future Directions

10. Robustness of CSF as a Partner: Although CSF is a small organization, it has a track record of 40 years performance in a fiscally prudent manner. It has successfully managed some significant changes in size and orientation. There is considerable continuity in senior staff, the key Associates and Board members. Those associated with CSF show a high level of commitment to the organization.

It has potential vulnerability from any turnover in the limited management team and in its dependence on few donors.

11. Future Development of ChildInfo: With the present responsive approach, CSF's role would gradually change towards more user servicing as the number of users increases and the software becomes more mature. The relative importance of outsourced software development would decrease. With growing servicing costs for national programs, efforts could be made to find a more cost efficient means to serve UN and national needs on a global basis. This might be achieved by more partnerships with regional institutions.

If the UN decides to create a global database, CSF's possible role could change considerably. The CSF experience to date indicates that it may be more cost effective for the UN to contract out some of the support functions required to roll out a global system than to manage system development internally.

12. Identifying the most appropriate niche for CSF: CSF brings assets developed over a long period of time in technical expertise in development of appropriate social indicator databases; the development of database software; and in its knowledge of a wide number of user needs and interests. It has focused on promoting local ownership and capacity building for national databases that respond to local needs.

- **Direct technical Support:** It could continue to provide services as at present on a global or on a demand basis for software modification, manuals, implementation needs including training, and monitoring services.
- **Network development of ChildInfo supporting services:** An additional function could be a role for CSF in helping develop and support a network of regional institutions who would bring linguistic capability, local knowledge and lower traveling costs than would be feasible from ChildInfo servicing from a central location. This would have the advantage of reducing dependence over time on one service organization.

13. CSF's ability to expand: CSF would have to make some changes in its operating style and management procedures if it was commissioned to significantly expand its services to a global UN database system.

- **UN Partnership:** CSF's role in a global database initiative would likely change its relationship with the UN from a contractor-driven project approach defining short specific activities to a broader strategic relationship. CSF would have to develop procedures and allocate resources to informing and interacting with a larger number of stakeholders. Given the working relationship it has established with a large number of countries and UNICEF and UN offices, there is no reason to expect that it cannot perform this function;
- **Other Development Organizations with IT Expertise:** CSF would need to begin working with other organizations that have a similar interest and capability as a global database would bring in new regional stakeholders with an interest in using this database.
- **An Expanded Team:** The staff base is so small that there is no redundancy built in and limited opportunity to create a team that could provide more back up capability. Some growth in CSF funding to service ChildInfo would allow for creation of a larger core management team.
- **Business Plan:** An expanded program would require CSF to develop a longer term business plan, which could be shared with different partners. It would identify medium term objectives and what steps would be taken to achieve them over a multi-year planning horizon. It would also allow for identification and ways to measure outputs outcomes and achievements of the long term goals of different partners.

14. Resources: The present arrangements whereby CSF receives short term contracts from multiple sources consumes a significant portion of CSF time in negotiating contracts and managing an uncertain flow of revenue. This provides an inefficient use of UNICEF resources. A UN decision to move to a global database with a longer term objective would allow for the negotiation of longer and more reliable funding base for CSF and provide better value for money to the UN.

If the UN wishes to have CSF undertake broader role than the short term project assistance provided to date, then resources will have to be provided to allow for a more strategic and consultative approach by CSF.

A c r o n y m s

APC	Association for Progressive Communication
BenInfo	Government of Benin Social Indicators Database
CSF	Community Systems Foundation
ChildInfo	UNICEF Indicators Database
DevInfo	UN Country Office Indicators Database
IDRC	International Development Research Centre
IT	Information Technology
MDG	Millennium Development Goals
MyInfo	Government of Myanmar Social Indicators Database
NGO	Non Governmental Organization
TanInfo	Government of Tanzania Social Indicators Database
UNDAF	United Nations Development Assistance Fund
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund

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1. Introduction

1.1 Background

Over the last 8 years, UNICEF has contracted Community Systems Foundation to develop and maintain a database software known as *ChildInfo* and to provide the technical support and training in the use of this software.

At present *ChildInfo* is being used as a stand-alone system in some 80 regional/country offices. In 10 countries the software is used by the UN Country Team for the purpose of tracing indicators related to the United Nations Development Assistance Framework (UNDAF) and other UN indicators such as those related to the Millennium Development Goals (MDGs) and major world summits. When used in this context, the software is labeled *DevInfo*. In some countries, the database is owned by the National Government and has been customized to the country's needs. In these cases, the software is presented under different names such as *BenInfo* in Benin, *MyInfo* in Myanmar, and *TanInfo* in Tanzania.

In his new reform plan, the Secretary General indicated the need for the UN to adopt a common database to monitor its development programmes (UNDAF) and the MDGs. The UN Secretariat is now actively considering this matter. UNICEF would like to make *ChildInfo* available to the UN System. Before formalizing its proposal, UNICEF wishes to ascertain that the stand-alone product receives proper technical certification of performance. This will be the object of a separate technical review. UNICEF also wishes to ensure that Community Systems Foundation (CSF) has the competence and ability to provide further development and support for the use of the software, should there be a world-wide demand for *ChildInfo* technologies. UNICEF decided to conduct an organizational assessment of CSF to inform its decision making process.

1.2 Objectives

UNICEF wishes to ensure that Community Systems Foundation (CSF) has the competence and ability to provide further development and support for the use of the software, should there be a worldwide demand for *ChildInfo* technologies.

The objectives of this evaluation are to assess, in a holistic fashion, the following four dimensions of the CSF:

- Organizational motivation: History, Mission, Culture, Incentives
- Organizational capacity: Leadership, Human resources, Financial management Organizational processes, Programme management, Technical expertise, Infrastructure, Inter-institutional linkages
- External environment: Administrative and legal, Socio-cultural, Technological, Stakeholders, Economic, Political
- Organizational performance: Relevance, Effectiveness, Efficiency, and Financial viability.

1.3 Methodology

The consultant has used the framework and methodology outlined in *Enhancing Organizational Performance. A Toolbox for Self Assessment* (IDRC and Universalialia, 1999) to guide his work in this assignment. A graphic summary is provided in Appendix III

1.4 Evaluation Team

Doug Daniels from Universalis was commissioned to undertake this evaluation. This involved site visits to the headquarters in Ann Arbor in conjunction with Jean Quesnel and George Ritter from UNICEF and to the ChildInfo activities in New Delhi in conjunction with George Ritter and Raul Castillo from UNICEF.

1.5 Limitations

As a small cohesive NGO, CSF has little formal documentation of its procedures that could be assessed. There is also limited assessment in this review of CSF effectiveness by its clients since this will be addressed in a parallel report on UNICEF assessment of ChildInfo and CSF support for this database. As CSF has primarily worked for UNICEF in the last five years, UNICEF staff assessment is the most important measure of client satisfaction.

1.6 Report Overview

Chapter 2 provides a few key factors that influence the environment for the type of support CSF has provided for the development of ChildInfo.

Chapter 3 provides some background on the history and culture of CSF.

Chapter 4 provides an assessment of 7 key organizational capacities.

Chapter 5 provides a brief synthesis of CSF's institutional performance.

Chapter 6 presents suggestions for the future role that CSF could play in view of several options for expansion of ChildInfo.

2. The Development Context

Growing Importance of information: The use of information for development has become an area of growing importance. The rapid development of information technologies has created an opportunity for the UN to create national and global databases to track the quality of life of communities, countries and regions; for governments to use this information to improve social conditions; and to allow civil society to hold governments and international organizations accountable.

Increased Visibility and Scrutiny: As civil society becomes more experienced in monitoring and using databases to lobby for disadvantaged communities; with continuing focus on accountability such as through NEPAD; and with improvements in the availability of data that allow for more comparisons over time and across regions, a Millennium Goals Database could itself become the subject of debate including issues such as contested data or criticism of sources used. Those involved will have to be aware of the broader aspects of their work beyond the technical issues.

Difficulty of Remaining at the State of the Art: The rate of technological change is so fast that it is difficult for any organization to be sure that it is pursuing the most appropriate technological approaches. Organizations involved in servicing databases will need to devote resources to understanding the potential of new software as well as an understanding of the ability of different users at the national level to adapt to and use new software.

Availability of IT Human Resources: The demand for IT expertise over the last two decades has pushed salary costs upwards and made it difficult to find this expertise until the recent major downturn in the market. This explosive growth has contributed to the rapid turnover of IT personnel with the average technology worker in California changing jobs every 18 months.

India is reputed to have the second largest pool of IT expertise in the world. Indian software firms have been able to capture a growing share of the global market, particularly in software modification where they are the dominant actors. India's top tier software firms such as Infosys, Wipro Ltd, Satyan and HCL Technologies Ltd with revenue of more than US\$2.5 billion in 2001 continue to grow by broadening their contractual work beyond custom software development into hardware-software integration and call centres. India has developed a reputation as a reliable location for safety of software and data management.

Small and medium sized firms in India are however not benefiting as much from these changes and the job pressure for IT expertise is somewhat reduced and salaries remain much below those in other major IT intensive economies.

Growing IT Capability in Social Development Oriented Organizations: While there is growing awareness of the ways in which new information technologies can impact on development issues, many of the older NGOs are not specifically addressing this. A number of factors account for this. It is difficult to acquire the expertise and capital required for many NGOs and many do not see how information technology can affect the lives of poor communities.

However the last decade has seen a rapid increase in the number of development oriented NGOs and other organizations such as universities that have good IT capability. Networks such as the Association for Program Communications (APC), the networking program run by UNDP and the Gateway program run by the World Bank demonstrate that there are now strong IT oriented organizations in each major region which could potentially play a role in supporting training or helpdesk services for ChildInfo or other databases as well as development organizations such as the national organizations involved with Micro International on demographic and health surveys.

3. The Community System Foundation

3.1 History and Evolution

CSF was created in 1963 as a non-profit public corporation with tax-exempt status (501(c) 3) in the state of Michigan. The laws of the State of Michigan and the USA govern the foundation. Created by some graduate students and university staff working on operations research, CSF was set up to provide opportunities for them to work in operations research in the public sector. The only opportunities at that time in this discipline were in the private sector.

CSF developed expertise in hospital management issues and grew to have a staff of about 100 employees with offices in different cities. This activity was hive off to become a commercial firm along with most of the staff in 1973. Only a few individuals remained with CSF, which turned its attention to working on nutrition issues in developing countries through contracts initially with USAID. For the next two decades, CSF handled more than 25 multi year projects, primarily in the nutrition field along with a growing portfolio in evaluation of primarily health and nutrition projects.

The next big programming cycle began in 1994 when CSF began to work on ChildInfo work with a small contract from the New Delhi office of UNICEF. This project lead to a growing number of ChildInfo projects in different regions so that it now constitutes the primary program activity of CSF.

3.2 Mission

Community Systems Foundation (CSF) is dedicated to improving the quality of life through applied research and direct assistance to communities, governmental agencies operating at the local, regional and national levels, and service oriented entities in the private sector. The cornerstone of the CSF approach is the development and application of techniques to help communities (groups of people sharing some common interest or identity) gain a better understanding of their environment and to act in accordance with that understanding to attain their goals. The common element in the CSF repertoire of techniques is community learning. It is only in partnership with the community that experts can begin to bring the tools of modern science to bear effectively on efforts to improve the quality of life.

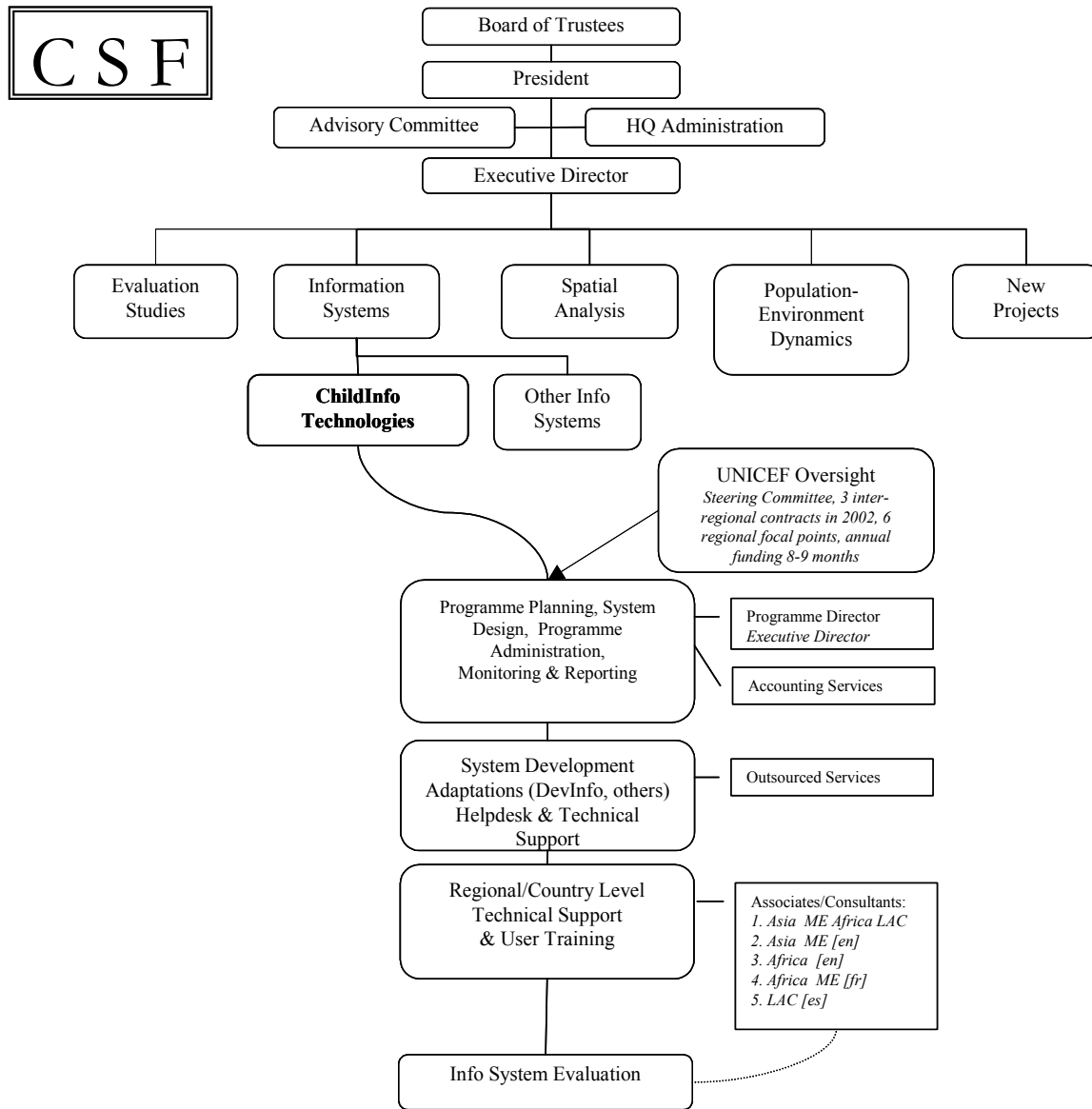
3.3 Culture

CSF has been able to maintain support from a strong cadre of individuals with involvement stretching back nearly 40 years. There is a strong sense of loyalty to CSF and its flexible non-bureaucratic operational style. While some associates indicated that they were able to bill at reasonable rates when they worked on CSF projects, the fact that they were often over qualified for the work that they have done shows the level of interest they attached to this work.

This strong commitment of many associates to CSF means that it is more personality driven than most organizations. There would be resistance by some long standing associates to developing a more formal management system which they would see as curtailing the entrepreneurial spirit of CSF and cutting down the time that should be devoted to project activities.

It is uncertain whether UN support for a broader UN database would provide an opportunity for many of the long term CSF associates to engage in field projects which would allow them to identify and address data collection weaknesses at the local level. CSF needs to keep identifying activities that are seen as appealing to its traditional constituency or risk losing at least some of them. It has some plans to develop new project activities that will appeal to these associates.

Exhibit 3.1 CSF Organizational Chart



Structure

The main offices of Community Systems Foundation are located in Ann Arbor, Michigan, on the edge of the University of Michigan campus. It houses a select library of literature on nutrition planning, health care, family planning, and rural development. Foundation Associates also work in New Delhi, India. The software development and data support services for ChildInfo are located in New Delhi where the CSF Executive Director supervises the work of contracted staff working on ChildInfo support.

The structure is remarkably lean for even a small NGO. The most notable feature of CSF in its present configuration was the decision to locate the Executive Director in New Delhi and to contract out most of the servicing activities to an Indian firm that works exclusively and closely with the Executive Director. This represents a high level of decentralization for a small NGO. Figure I show the present organization chart for CSF activities for ChildInfo.

4. Organizational Capacity

4.1 Introduction

This section looks at 7 interrelated organizational factors that affect organizational performance: strategic and operational leadership; governance; organizational processes; human resources; financial management; revenue generation; and inter institutional linkages.

4.2 Strategic and operational leadership

In order to survive and prosper in a rapidly changing context, organizations need to be able to change quickly. They require strategic leadership to link their external and internal realities so as to improve their own performance. This assessment of CSF's strategic leadership capacities focuses on the following three variables:

- the extent to which CSF's leaders are effective in identifying, guiding and monitoring changes in the organization's performance;
- the extent to which CSF's strategic planning and management processes support the organization in improving its performance; and
- the extent to which CSF is undertaking niche management to achieve its mission and goals.

As a small NGO, CSF has attracted very senior and committed staff and associates to serve on its Board and provide ongoing input to programming activities. There is only two full time professional staff involved as directly contracted staff (the President and the Executive Director). The President has been in office since 1976 and the Executive Director, promoted to that position in 1998, has worked for CSF for 18 years. Thus there is an extremely high degree of continuity in senior management.

Leadership has been collegial between these two members and with the Board, providing a very cohesive but rather narrow constituency. The President who works for the majority of his time on CSF receives only nominal compensation. The Executive Director works full time for CSF with about 95% of his time spent on ChildInfo and DevInfo activities.

CSF does not have a formal strategic plan and very limited organizational procedures. CSF's activities have been driven by some degree of planning and by serendipity. This informal style has worked to date given the small nature of the CSF program and the project nature of CSF's work that allowed it to tap readily available high level expertise, primarily from the University of Michigan. While this may have been feasible (and necessary), as CSF's annual revenue has not exceeded one million dollars before this year, without more formal planning and procedures, the risks of misunderstanding and inefficiencies would increase if CSF were to grow to a much larger size.

4.3 Governance

The CSF charter designates that CSF has six members who are to meet annually and who are responsible for selecting Board trustees. In addition to the President and the Executive Director, the Board trustees are often CSF Associates although there are some members who have not had any financial involvement with CSF through working on CSF projects. The CSF members have made efforts to renew the Board by appointing younger trustees who were not involved in the earlier work of CSF.

The Board meets frequently and Board members demonstrated a high degree of knowledge about the operations of CSF. It addresses the key governance issues of future planning issues, annual work plans and financial monitoring. However Board discussions on strategic planning issues over the medium to long term have been informal.

4.4 Organizational Processes

There are few documented procedures used in CSF except for financial management and the extensive project documentation. There was a concern expressed by many that developing the functions of a more traditional organization would dilute the benefits that a small cohesive organization can achieve. CSF has had a more formal organization in the period 1963-1972 and this was pointed to as evidence that CSF could do this again if this was required.

4.5 Human Resources

CSF has a pool of 70 Associates who are individuals willing to work on CSF projects and a smaller pool of 17 core Associates who have done work for CSF and are most knowledgeable about the organization. The profiles of the senior associates show that they constitute a pool of highly educated talent able to work on assignments of limited duration. These have largely been drawn from the University of Michigan and the region although there are now a number of associates from other countries.

However the software development and training requirements for the ChildInfo and DevInfo projects required a different type of skill or more ongoing routine work. CSF has chosen to out source the software development and help desk requirements to an Indian firm, Logiciel while maintaining a close daily monitoring of this outsourced work. The four Associates who are employed as consultants to assist CSF in training and technical support for ChildInfo programs at the national level are drawn from outside the US. They have English and French language capability to run national training activities for ChildInfo. Associates working on ChildInfo activities have been recruited on an informal basis with promising individuals given short contracts and then contracted again if their performance is acceptable. As this program evolves over time, it will presumably be useful to find more people in each region who have these skills as well as local knowledge to support ChildInfo or broader UN database development.

This however leaves the day-to-day management responsibility for ChildInfo largely with the Executive Director in New Delhi. The volume of work is apparently already onerous for one person and there would have to be some increase in staff if CSF was asked to play a larger role in ChildInfo or a wider UN database. There would have to be some full time staff employed in New Delhi to work with the Executive Director and to be fully knowledgeable about all aspects of CSF and ChildInfo plans and activities.

With only two key full time staff involved with CSF over a long period of time, turnover has not been a problem. However the departure of one of these two individuals could create a serious problem for CSF. Management and operating procedures are largely in the personal memory of these two individuals. Some planning has been done to identify replacement options but a smooth transition would be easier if there was a larger staff compliment and staff was familiar with most aspects of the CSF operation.

4.6 Logiciel

Logiciel is a private Indian company that is 100 percent owned by two Indian nationals. It was established in 1994. CSF contracted with several software firms before choosing to contract Logiciel in 1998. This contract is the only business link between CSF and Logiciel. CSF has continued to work with Logiciel since then through annual contracts to provide software development and helpdesk services for its UNICEF ChildInfo projects as well as for some similar USAID work in India. Logiciel has done some work for other organizations; primarily the Government of India but it now works exclusively under contract to CSF. It believes that this work is giving it a strong capability in mapping data that gives it a good future market niche.

The CSF Executive Director works closely with Logiciel staff to meet ChildInfo requirements and he works out of Logiciel offices when he is in New Delhi.

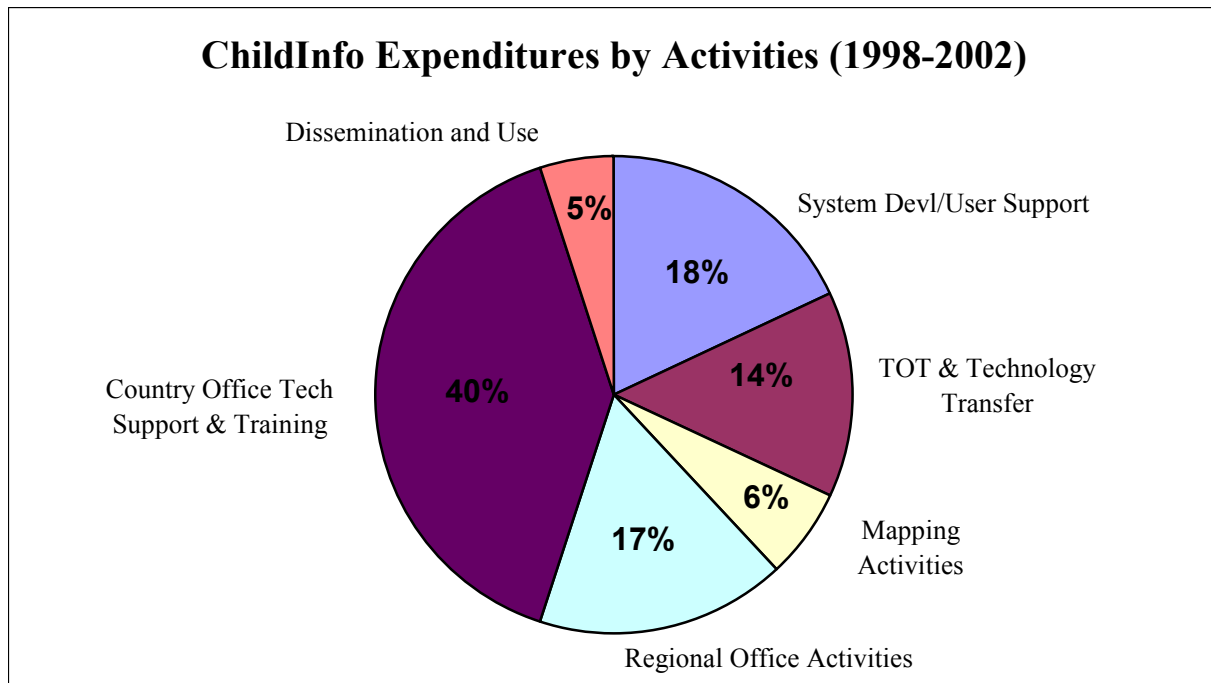
Logiciel provides 13 staff who work full time on CSF activities. This team is composed of one project management, three team leaders, three software developers, two mappers, two on graphics and two who work on data management and helpdesk functions.

Logiciel facilities are large enough to accommodate the present staff with some space for expansion. There are new computers for all staff and some specialized equipment for map making and printing.

The primary difficulty for Logiciel, which is common to other software firms, is being able to recruit and keep good staff. The turnover rate is high and Logiciel provides permanent status and different employee perks such as performance bonuses and training to keep staff. The longest serving staff member other than the two owner/managers has been with Logiciel for four years.

The following chart shows the distribution of CSF resources over the five year period 1998-2002 between the different functions that UNICEF has commissioned from CSF.

Exhibit 4.1 ChildInfo Expenditure by Activities (1998-2002)



4.7 Financial Management

Most financial accounting has been moved to New Delhi although payments are still made from Ann Arbor because CSF does not have a legal status in India. This seems to be working well through electronic communication. The software is adequate for a much larger program so there need not be any financial tracking difficulties for a larger program.

Financial information is primarily prepared to account to donors for project activities which covers nearly all the revenue of CSF; for reports to the Board of Trustees; and for financial reports require by law. The CSF auditor has confirmed that the internal control procedures in CSF are sound and the accounts of CSF are well maintained.

CSF has suffered from the short term contracts that UNICEF has provided. While intended to be annual contracts, CSF has not received the contracts in the first quarter of the year over the last two years. This leaves less than 9 months to complete a programme planned for a full year.

In addition, planned activities have been cancelled during the year, which leaves little time to renegotiate consultant contracts. The effect of these changes during 2002 is projected to represent a shortfall of more than a net 10 percent of the value of the annual UNICEF contract. This represents a major loss in income in a short period of time that is not compensated by cancellation fees or some other compensation. This represents a very high level of risk for an organization that has become very dependent on UNICEF for funding and which budgets for essentially a balanced budget each year. This does not serve either UNICEF or CSF interests and a new budgeting arrangement should be negotiated that provides a greater degree of assurance of income on which to contract staff and plan activities.

If the UN system were to negotiate a longer term contract with CSF, then it would probably want to develop budgetary categories that would allow for more accurate vetting of costs in software, training and other categories that are not tracked through the present contractual agreements. This might require some upgrading in financial accounting staffing.

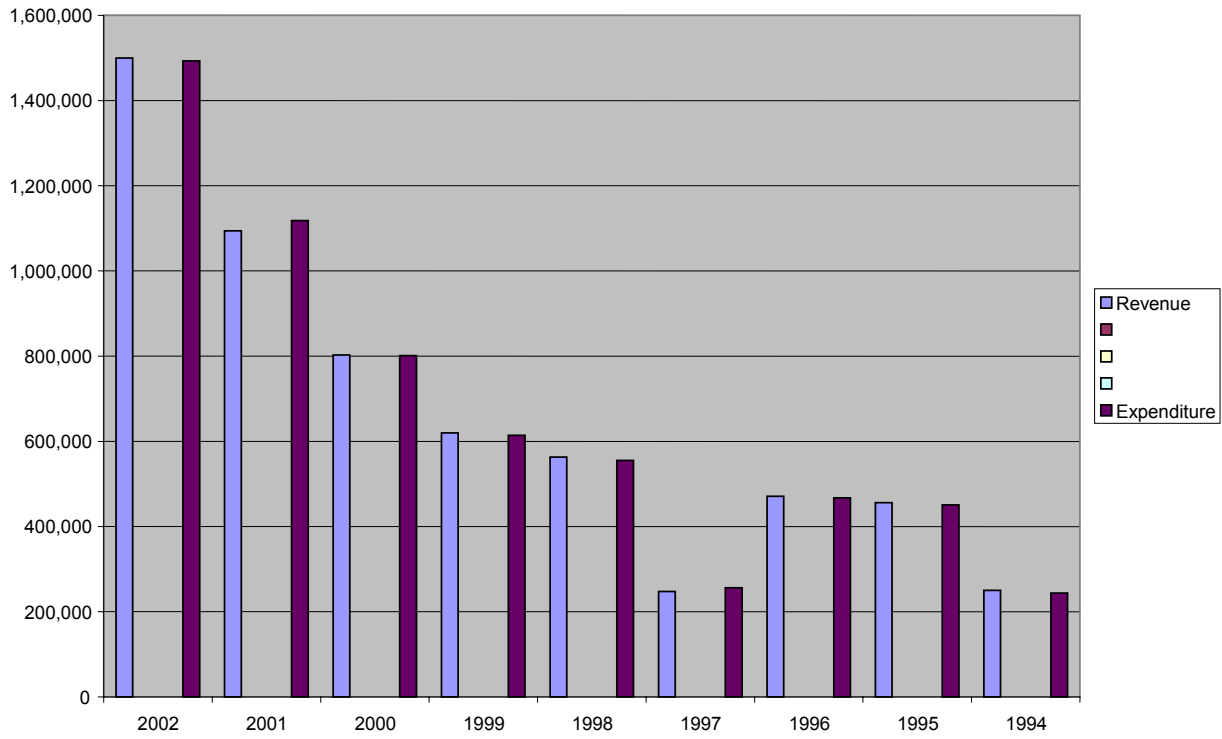
4.8 Revenue Generation

The year 2001 was the first year that CSF's revenue exceeded one million dollars. It has a very narrow funding base with dependence largely on USAID, UNFPA and World Bank between 1973 and 1994 and then on UNICEF with small amounts from UNDP since then. CSF has indicated that it prefers to work on only a few issues at a time so this affects the number of donors it can work with at any one time. Exhibit 4.1 shows the recent financial history while Exhibit 4.2I shows revenue and expenditure over the last 30 years. Revenue generation has shown a positive trend since 1994 when the UNICEF funding began. Revenue is projected at about \$ 1.5 million in 2002 with the addition of a significant USAID contract. Its revenue will have almost doubled in the last three fiscal years.

Under present conditions, the main financial risk would arise from the loss of UNICEF funding. CSF is so heavily dependent on UN funding that the loss of other funding sources would not likely affect CSF's ability to continue to service UNICEF or UN contracts. See Exhibit 4.3

The unappropriated surplus increased modestly over time until 2001 when the sale of the CSF building in Ann Arbor allowed CSF to increase its reserves to \$620,000. This should provide a reasonable base for the level of expenditure that CSF has been making in recent years. However reserve funds are barely adequate to provide working capital due to frequent delays in payment from UN organizations. The annual surplus generated from the UN and other contracts is so small, normally less than \$10,000, that the UN would either have to provide working capital up front or make more frequent payments if CSF was contracted to manage a larger program.

Exhibit 4.1 Recent Financial History



5

⁵ 2002 estimated revenue and expenditure

Exhibit 4.2 30 Year Financial History

Year	Revenue	Expenses	Revenues Less Expenses	Unappropriated Surplus
1973(2)	\$744,495	\$794,057	-\$49,562	\$98,771
1974(3)	\$44,976	\$61,043	-\$16,067	\$82,704
1975	\$116,343	\$120,656	-\$4,313	\$78,391
1976	\$231,938	\$226,609	\$5,329	\$83,720
1977	\$325,329	\$313,207	\$12,122	\$95,842
1978	\$461,913	\$477,982	-\$16,069	\$79,773
1979	\$489,583	\$473,217	\$16,366	\$96,139
1980	\$423,365	\$424,937	-\$1,572	\$94,567
1981	\$308,184	\$292,828	\$15,356	\$109,023
1982	\$243,056	\$226,124	\$16,932	\$126,855
1983	\$250,740	\$257,082	-\$6,342	\$120,513
1984	\$271,068	\$269,594	\$1,474	\$121,987
1985	\$374,671	\$374,292	\$379	\$122,366
1986	\$496,911	\$491,600	\$5,311	\$127,677
1987	\$587,156	\$567,600	\$19,556	\$147,233
1988	\$579,301	\$577,755	\$1,546	\$148,779
1989	\$477,526	\$475,324	\$2,202	\$150,981
1990	\$412,678	\$434,388	-\$21,710	\$129,271
1991	\$475,936	\$470,469	\$5,467	\$134,738
1992	\$458,236	\$443,292	\$14,944	\$149,502
1993	\$272,184	\$284,775	-\$12,591	\$138,810
1994	\$354,077	* \$343,987	\$10,090	\$148,900
1994 ⁽⁶⁾	\$248,829	** \$249,389	-\$560	\$148,340
1995	\$449,398	\$444,689	\$4,709	\$153,049
1996	\$468,491	\$464,644	\$3,847	\$156,896
1997	\$243,360	\$251,977	-\$8,617	\$148,279
1998 ⁽⁷⁾	\$535,800	\$528,020	\$7,780	\$156,059
1999	\$616,217	\$610,737	\$5,480	\$161,539
2000	\$799,824	\$798,341	\$1,483	\$163,021
2001 ⁽⁸⁾	\$1,091,253	\$1,088,541	\$2,712	\$619,735

⁶ Begin streamlining operations to provide more development resources.

⁷ Further reduction of overhead costs to allow for low-overhead clients.

⁸ Move HQ to 1310 Hill Street, generating \$500,000 more working capital.

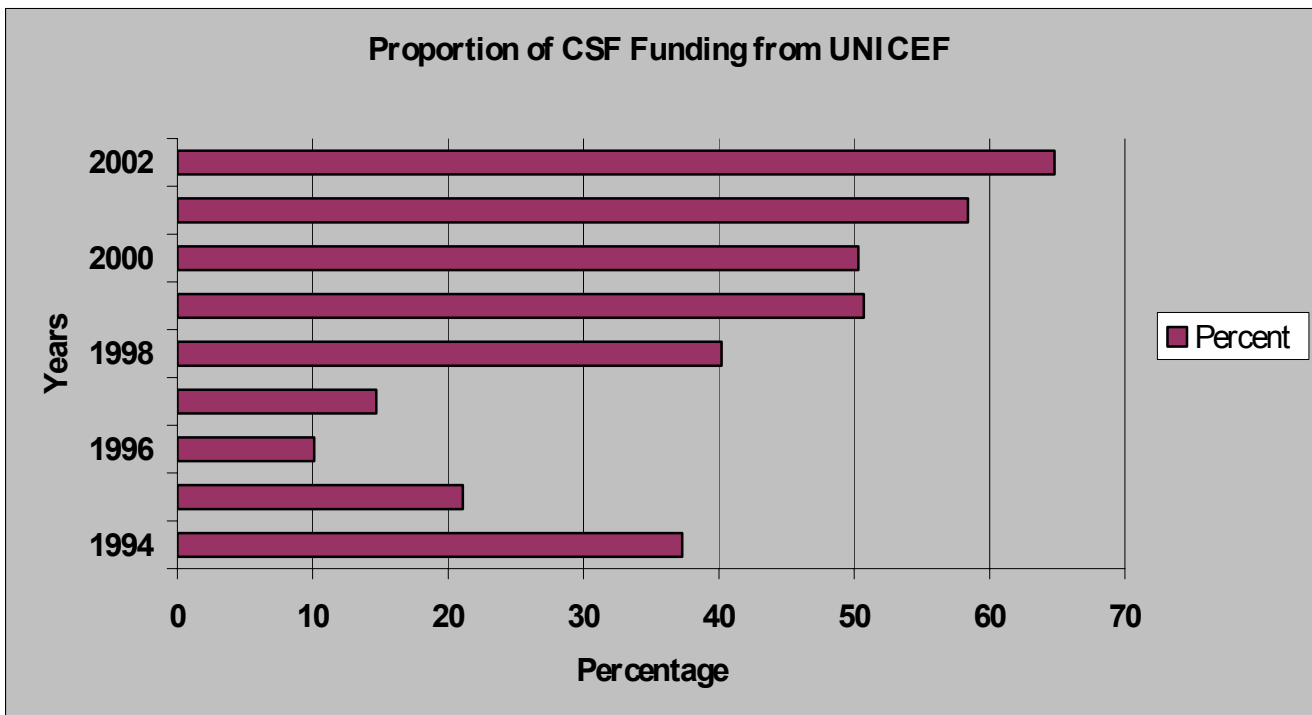
2002	\$1,500,000	***	\$1,493,000	\$7,000	\$626,735
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* Change in fiscal year from year ending 5-31 to 12-31

** Derived from IRS 990 ending May 31, 1994

**** Estimated revenue based on current invoice rate.

Exhibit 4.3 Proportion of CSF Funding from UNICEF



4.9 Inter-organizational linkages

CSF has some good contacts with other organizations in the US, often through its Associates. However, except for India, it does not have many linkages with organizations in developing countries. See Appendix II. Should CSF be asked to take on a broader support program for a UN database, some mechanism should be agreed between CSF and the UN that would facilitate development of partnerships with organizations in the different developing regions that could bring knowledge of the local socio-cultural environment and linguistic capabilities for complimentary servicing of the UN database. This would also have the advantage of reducing UN reliance on one organization.

4.9.1 University of Michigan

CSF signed an MOU with the School of Natural Resources at the University of Michigan in 1978 but there is no legal or formal relationship between CSF and the university or any apparent possible conflict of interest. The links with the university have however been beneficial to both parties. CSF has been a means for staff and students to work on interesting assignments and a number of graduate students have been able to do their thesis through CSF activities. CSF has been able to get interns working for them at no cost to CSF with 10 interns provided since 1995. Many of the CSF associates and Board members have been drawn from students who originally worked as interns for CSF.

5. Organizational Performance

5.1 Introduction

This chapter presents a review of CSF's organizational performance. Although various stakeholders in an organization may see performance in different ways, for the purposes of this review we have examined four elements of performance:

- Effectiveness – the extent to which CSF is achieving its mission and objectives
- Efficiency – the extent to which it is using its resources well
- Relevance – the extent to which it adapts its programs and services to meet the needs of its changing environment, and
- Financial viability – the extent to which it can sustain its operation and activities over time.

5.2 Effectiveness

While there are no formal evaluations that have been carried out on CSF in the past, the fact that donors have continued to fund new projects with CSF over time is evidence that donors have confidence in CSF performance. This review is being prepared in conjunction with a review of UNICEF's assessment of ChildInfo and the views of UNICEF staff on the quality of CSF support. It will thus provide the most important user assessment of CSF effectiveness.

Future funding from the UN for a broader program should also include the setting of concrete milestones and objectively verifiable indicators to measure outputs, outcomes and effects so that effectiveness can be measured over time.

5.3 Efficiency

CSF is a remarkably lean organization and has become almost a virtual organization. There are six contractual staff besides the President and Executive Director. Total staffing in 2002 amounting to approximately 5 ½ full time staff equivalent. Except for the training consultants, there is only one full time contracted employee. All staff is on contract and the facilities in Ann Arbor are at minimal cost. CSF has no offices in New Delhi and the Executive Director usually operates out of his home or uses office space at Logiciel. Some per capita savings on travel could be made if CSF had a bigger program with UNICEF that would allow it to use more regional consultants.

India provides the largest pool of technical expertise at competitive salaries of any country with good IT capability. The contract with Logiciel shows that contracting out IT support services to an Indian firm is much cheaper in terms of manpower costs and management complexity than CSF could achieve if it tried to develop its own data servicing capabilities.

5.4 Relevance

CSF's mission and expertise in data management, presentation and analysis is an area of growing importance. It had experience in creating databases and modifying data collection at the local level in the nutrition field before working with UNICEF and has now enriched this expertise through its experience with the establishment and expansion of ChildInfo over the last 8 years. It has modified its approach a number of times over the years from hospital administration to nutrition and evaluation and then again to meet ChildInfo needs. With growing use of IT in the development field, its development niche continues to be highly relevant in the development field and for social database development such as ChildInfo.

5.5 Financial Viability

CSF has demonstrated an ability to manage its activities without going deeply into debt for close to four decades. It has taken steps in the last few years to increase its viability by putting all staff on contract and by selling the CSF property in Ann Arbor to increase reserves that increase its viability. It has very limited downsize risk.

It is viable at this level of operation but, as pointed out in the section on revenue generation, it does not have the cash reserves to handle a much larger programme without more upfront funding or a more frequent and reliable payment schedule.

6. Future Directions

6.1 Introduction

This section addresses the ability of CSF to adapt to different operational requirements and the challenges of accommodating to a larger program if it was to take on a broader partnership role with the UN system.

6.2 Robustness of CSF

Although CSF is a small organization, it has a track record of 40 years performance in a fiscally prudent manner. It has gone through some significant changes in size and orientation. There is considerable continuity in senior staff, the key Associates and Board members. Those associated with CSF demonstrate a high level of commitment to the organization. It has pared fixed costs to such a low level that there is little downside risk to CSF.

The two areas of vulnerability are dependence of a few funding sources and a small permanent staff base. It is vulnerable to any changes in the small management team who have been in place for longer than average. This vulnerability can be reduced if CSF receives resource to expand its fulltime staff who could be given a broad enough role that they could cover off, at least temporarily any departure of the present staff. Over the longer term, CSF associates indicated it does need to look to ways to bring in new younger Associates and Board members, particularly those not located in the Ann Arbor area.

In terms of UNICEF's ability to rely on CSF, there appears to be no serious external issues that might affect CSF performance. It receives funding in US dollars and disperses funds in a number of currencies but, with such short term contracts, there is limited currency risk. CSF operates in some unstable countries but it usually works either directly with a UNICEF office or under the auspices of a UNICEF office. The only possible future risk that might arise would be government policy changes in its home country that would impair its ability to work in all member UN countries.

6.3 Future Development of ChildInfo

ChildInfo has apparently now reached a sufficient level of maturity in terms of software development and use by different UNICEF country and regional offices, UN offices with DevInfo and within countries that CSF's role in further ChildInfo development will have to change. If ChildInfo was continued as a responsive program with some customization to meet individual interests and needs, CSF would have to make changes in the scale of its program and in its organization to respond to a growing portfolio of countries. Some of the changes that this would require in how CSF organizes itself are spelled out in subsequent sections.

It would mean changes in the mix of resources on software development and customization and on efforts directed to standardizing software and training. The relative emphasis on servicing existing countries would increase and management of training could be expected to grow.

The changes would be more significant if a decision is made to develop a coordinated global program with a comprehensive and cohesive database with a role for CSF as a servicing agency.

6.3.1 A Comprehensive Global Database⁹

Expansion from the present 60 countries that have a ChildInfo database to some 160 countries in a global database could entail a major effort. Some countries would have either a low level of interest and/or capability to implement such a database.

If a decision were made that UNICEF or the UN will roll out ChildInfo on a global basis with some common elements in all national databases, then the UN would undoubtedly have to appoint a focal point to oversee and coordinate this broader program. It would have to work with a large number of stakeholders within UNICEF; other UN agencies, participating countries and other interested multilateral and bilateral agencies. The UN would have to take responsibility for a large set of activities such as ensuring standardization of content, minimum datasets in each country, training manuals, software modification and distribution, and the development of measures to ensure data integrity and to promote use of the databases.

While UNICEF could take over all these aspects, the CSF experience shows that there would be cost advantages in contracting out support for features such as training, software modification and helpdesk services from outside the UN to agencies such as CSF.

Certainly the creation of a focal point would have advantages for CSF or other contracted agencies in being able to respond to one central focal point rather than directly and unilaterally with a large number of UNICEF offices as is now the case.

6.4 Identifying the Most Appropriate Niche for CSF

The ChildInfo initiative catered to CSF interests in finding solutions to local problems. CSF provided intellectual capital though an active interface between local classification problems and software modification to accommodate local needs. This bottom up responsive approach facilitated the design and gradual roll out of the ChildInfo database. The focus was on user needs and not on imposing a technological solution with a predetermined software package.

It also brought experience in tailoring data collection and analysis in health and nutrition projects over a 20 year period. Its experience with ChildInfo has given it an additional acquired advantage in knowledge of the software development process and the needs, interests and capabilities of a large number of countries and UNICEF country and regional offices. Only CSF has the detailed knowledge at present of the evolution of the software and the reasons why different choices have been made.

Thus CSF brings assets in both technical expertise and knowledge of user interests and needs and it is thus well placed to play a supporting role in future development of ChildInfo.

It recognizes that it cannot play a leadership role in developing a comprehensive or cohesive global database. This will require an organization with the authority and global presence of the UN. It is a small NGO with neither the interest nor the organizational capacity to run a large turnkey operation servicing a global database on its own.

⁹ The issue being addressed in this review is the institutional capability of CSF and its ability to assist in the development of a social indicators database. The question of whether this is managed by UNICEF alone or some other part of the UN or whether it covers only the indicators in ChildInfo or all the MDG indicators should not significantly affect the potential role of CSF. For convenience this review refers to UNICEF as the UN implementing agency and ChildInfo as the name of the social indicators database.

6.4.1 Direct servicing assistance

CSF could be contracted to run some components completely by itself. It could also continue to provide services in the areas of software development, implementation and monitoring. This could be provided on a comprehensive basis or on an as needed basis for individual regions and countries.

One issue that a UN wide database would have to address is the acceptance and use of a database at the national level by UN offices and the individual countries. CSF believes that some countries already participating in ChildInfo have concentrated more on the creation of the database as the primary objective and have not yet attempted to use this database in a meaningful way. There will be other non-participating countries where the level of interest is low or there is little awareness of how such a database can be used. Where local UN offices are not able to provide assistance to develop this interest, this could be contracted to CSF or another external agency.

6.4.2 Developing a network of database supporting institutions

However, it could also be given a role in helping develop a network of regional ChildInfo supporting institutions. The arrangement whereby CSF contracted out software development and helpdesk services to an Indian firm is an example of a cost effective approach in sharing responsibility. Training and helpdesk service is one area where CSF may be able to provide a cost effective service in helping select regional and eventually national institutions in some larger countries which could provide local knowledge and language expertise at a lower cost than a centrally run programme. CSF could assist in the selection, initial training, networking and monitoring of these institutions.

From the perspective of the use of ChildInfo by countries in the management of their databases, it is likely that there will be ongoing demand for system innovation where CSF could play a leading role. However, over time the role that CSF can play in assisting development of a global database will decline as the system becomes more mature and UNICEF and other agencies are able to provide the needed support.

6.5 Ability to Expand CSF Program Activities

CSF would have to make significant changes in its operating style and management procedures if it was commissioned to significantly expand its activities in a supporting role to the UN:

6.5.1 Partnership

UN Partnership: An expanded role for CSF within a global UN managed database system would change its relationship towards a broader partnership mode from a project-driven contractor relationship defining specific activities to be carried out. In turn, CSF would need to inform and work with a broader set of partners including finding and creating strategic alliances with organizations, rather than individuals, in different regions who could compliment CSF work. CSF would have to allocate more time to interacting with these other stakeholders and devote more resources to documenting and informing others through reports, website updates and other communication means. While it has not had to play such a major facilitating role with so many actors, it has already worked with a large number of countries and with many UNICEF country offices on an ongoing basis. There is no reason to expect that it cannot perform this role with additional resources.

Other Development Organizations with IT expertise: There are probably few NGOs that have a comparable expertise to CSF in information management techniques and a track record of applying this in practical application in developing countries. CSF has worked in all developing country regions over its 40 year history and has, in recent years, broadened the national diversity of its associates. It has also established a base in New Delhi to serve the ChildInfo program.

However, the number of social development NGOs with good IT expertise is growing. With its limited size and lack of presence in different regions, CSF would benefit from developing partnerships with these growing organizations to share efforts particularly in the area of local training and monitoring. The CSF approach of responding to the needs of country and regional interests demonstrates its orientation to serving the needs of other institutions and would be useful in network support. The emphasis of CSF work would shift from problem solving towards more emphasis on capacity building and CSF may need to refine its expertise in this area.

6.5.2 Expanded Team

The staff base is so small that there is no redundancy built in. While consultants have been contracted to do specific assignments in different countries, only the Executive Director and, to a lesser extent, the President have a broad overview and knowledge of the different elements of CSF's work on ChildInfo.

At least one more person would have to be based in New Delhi to share in management issues with the Executive Director. A team approach will be needed to provide some back up capability to address a wide range of issues involving the technical and managerial issues involving different partners.

6.5.3 Business Plan

An expanded program would require CSF to develop a comprehensive business plan that could be shared with different partners and other stakeholders. This would extend beyond the present project documents CSF has been required to prepare for the short term contracts it has received. This plan would need to lay out a strategic overview of the present situation globally with options and possibilities for addressing common obligations in a multi-year planning horizon. It would identify what resources CSF would need to employ in terms of staff and the responsibilities of each group. It would set out timelines and identify objectively verifiable indicators that would trace not only inputs and outputs but also allow for broader measures of overall achievements that meet the goals of multiple partners. This would ensure that CSF is able to provide evidence of its performance and achievements. Resources would have to be provided for this planning and monitoring.

6.5.4 Organizational Changes

A significant increase in program activities and a change in the contractual relationship with the UN would inevitably require more formal planning and operational procedures. Program objectives would become more complex, more actors would be involved and program and individual targets would need to be coordinated with many more actors. Thus its activities would need to be planned, documented and made available to more people for information and accountability. This would likely result in some changes in the CSF culture of informal collegiality.

It would also inevitably lead to some changes in the way that CSF organizes its work. One possibility is that CSF might decide to shift almost complete responsibility for a UN database programme to New Delhi. It would also have to consider whether CSF would need to establish a legal presence in New Delhi.

6.6 Resource Implications for CSF

The present arrangement whereby CSF receives short term contracts from multiple sources for the ChildInfo program consumes a significant portion of CSF management time both in negotiation and in the financial management required for short and fluctuating financial flows from UNICEF contracts. This represents an inefficient use of UNICEF resources provided to CSF. While funding could still be rolled up from a country and regional base, it should be negotiated in a comprehensive multi year program that allows CSF to share in the discussions on issues and objectives as a partner. A longer term contractual arrangement with UNICEF with assured financing on a regular basis would free up CSF resources to play a more strategic role in developing a UN wide database and provide better value for money to UNICEF. It

would allow UNICEF to identify a broader set of objectives for CSF collaboration and to allow for more accountability on the part of CSF, not only for short term outputs but also on achievement of outcomes and impact. If the UN wishes to have CSF undertake this broader role, then resources will have to be provided to allow for a more strategic and consultative process by CSF.

Appendix I Individuals Consulted

Sandra Arlinghaus, CSF Core Associate, CSF Trustee Ann Arbor

David Balsom, Bellanet Ottawa

Eugene Brazeal, CSF Independent Auditor, Brazeal and Company Detroit

Barton Burkhalter, CSF Core Associate, CSF Founding Member Ann Arbor

Raul Castillo, Regional IT Manager, UNICEF Amman

Raul Dev, President, Logiciel New Delhi

William Drake, President, CSF Founding Member and CSF Trustee Ann Arbor

John Gilmartin, Chief, Supply and Procurement, UNICEF New Delhi

Fred Goodman, CSF Core Associate, CSF Member, CSF Trustee Ann Arbor

Kathryn Huss, CSF Trustee, CSF Secretary Ann Arbor

Carole Joling, former head of information services, IDRC Ottawa

David Joy, Chief, Programme Information Management Office, UNICEF New Delhi

Arun Kapuria, Administrative Manager, Logiciel New Delhi

Colleen McGee, CSF Core Associate Ann Arbor

John Nystuen, CSF Core Associate, CSF Trustee, CSF Treasurer Ann Arbor

Kris Oswald, Executive Director, CSF Trustee New Delhi

Laura Perkins, former CSF Accountant Lansing

Jean Quesnel, Director, Evaluation Office, New York

George Ritter, Manager, Business Intelligence, UNICEF New York

Richard Shackson, CSF Trustee Ann Arbor

Chandra Sekar, Programme , UNICEF New Delhi

Rajesh Sharma, CSF Associate New Delhi

Hope Sukin, Nutrition Specialist, USAID Washington

Sandra Westrin, CSF Senior Administrator Ann Arbor

Dean Wilson, CSF Trustee. CSF Founding Member Ann Arbor

Frank Zinn, CSF Core Associate, CSF Trustee Ann Arbor

Appendix II Technical Collaborators

Academy for Educational Development, USA

CEDPA, USA & India

EngenderHealth (formerly AVSC), USA & India

International Science & Technology Institute, USA

John Snow, USA & India

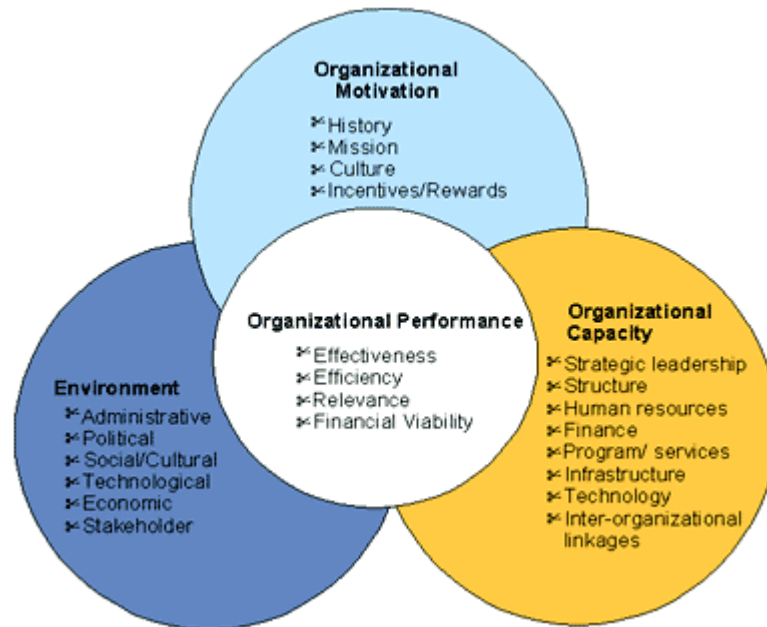
Logiciel Information Systems, India

Nippon Koei, Japan

Software Development Corporation, India

Wishwa Consulting Services, India

Appendix III Institutional Assessment Framework



Appendix IV List of Projects Undertaken by CSF

Program Evaluation and Host Country Institution Building

- The KB-Gizi Evaluation in Indonesia
- Evaluation of Integrated Child Development Services in India
- Enhanced School Feeding in Sri Lanka
- Food Policy Research in Sri Lanka
- A Mid-Term Evaluation of Winrock Technical and Training Services to PVOs
- Evaluation of Plan to Phase out the PL 480 Title II Program in the Philippines
- A Summary Evaluation of Egypt's Nutrition Education in Health Centers Project
- Evaluation of the Income Generating Component, P2K, of the Village Family Planning/Mother and Child Welfare Program in Indonesia
- Reporting and Evaluating the Current Primary Health Care System and Problems in El Salvador
- An Institutional Evaluation and Redesign of a school Feeding Program in Ecuador
- An Evaluation of the Joint Nutrition Support Program Country Project to Reduce Iodine Deficiency in Bolivia
- Designing a Global Evaluation Model for the Infant Mortality and Infant Morbidity Reduction Program (PREMI) in Ecuador
- A Study of Intersectoral Operations in the WHO/UNICEF Joint Nutrition Support Program's Country Projects.
- WATSAL Indonesia Study on Policy Reform in Water Resources Sector

Management Information Systems and Data Base Systems

- Progress Reporting System (PRS) for Windows: An Adaptation for Reporting Progress of Nutrition Programs
- ICDS Progress Reporting System, India, funded by USAID
- UNFPA Progress Reporting System for MCH/FP in Syria
- UNICEF New York ChildWatch System for Dracunculiasis Eradication Programme in West Africa (18 countries)
- UNICEF India Nutrition Data Base/GIS
- US Library of Congress Integrated Order, Distribution and Accounting System in Washington DC, Delhi, Karachi, Cairo, Jakarta, Rio
- UNICEF ChildInfo database system (60 countries)
- MIS for Monitoring Income Generating Schemes in Indonesia
- Inventory Control System for Managing Supplies and Pharmaceuticals in Honduras
- USAID Innovations in Family Planning Services MIS in Uttar Pradesh, India
- UN DevInfo India database system (social development indicators)
- UN DevInfo Maldives database system (social development indicators)
- TSED database system, Tanzania (socio-economic database to monitor poverty reduction)
- UN NepalInfo database system (millennium development goal monitoring)
- UN DevInfo Turkmenistan database system (social development monitoring)

- UN ChinaInfo database system for Common Country Assessment (CCA) indicators
- BenInfo database system, Benin (social development indicators)

Geographic Information Systems

- The World Bank Pakistan Middle School Mapping Project
- UNICEF India Nutrition GIS
- UNICEF ROSA Atlas of South Asian Children and Women
- USAID Key Indicators for ICDS Programme in India
- USAID GIS for Vitamin A Operations Research Project in Nepal
- UNICEF Child Info mapping for Asia, Africa, Latin America
- Education for All (EFA) mapping for UNICEF, UNESCO

Prevalence Assessment, Project Design and Implementation

- Operations Research Study on Vitamin A Interventions in Nepalese Children and Cost-Effectiveness of Various Approaches
- School Feeding Program Design for Ecuador
- Redesign of a Nutrition Program in Haiti
- Planning, Monitoring and Evaluation System for the CRS Food for Work Program in India
- Development of Designs for Child Survival Projects for Papua New Guinea and the Solomon Islands
- Acquisition of Math Skills in a Game Environment in Belize
- Development of Guidelines for Health Sector Assessments
- Monitoring Agricultural Conditions in Rural Afghanistan
- Development of a Strategic Plan for the Data Management Activities of the National Family Planning Coordinating Board of Indonesia
- A Redesign of Projects to Introduce Microcomputers to Two Remote Districts in Malaysia, and to Improve Delivery of Services to Mothers and Children in the Sang Kancil Program
- Implementing Management Objectives in the Agricultural Sector of Morocco
- Designing a Global Evaluation Model for the Infant Mortality and Infant Morbidity Reduction Program (PREMI) in Ecuador

Appendix V Papers and Publications

1990-Present Only

CSF02.7

CSF Working Document. UTTARANCHAL: MIS & Contraceptive Distribution Systems Policy Issues in Reproductive Health Services in Uttaranchal, India by Kris Oswalt, May 2002.

CSF02.6

CSF Working Document. UTTAR PRADESH: System requirements analysis for UP District Hospital Management Information System, by Kris Oswalt, April 2002.

CSF02.5

CSF Working Document. RH NGO MIS. Documentation for reproductive health management information systems for NGOs working at the community level in India, including Baseline Survey, Family Card, Referral Card, Daily Diary, Monthly Progress Report and Quarterly Progress Report. Documentation in English and Hindi. Pilot study conducted by an NGO in Jharkhand, India, 2002.

CSF02.4

CSF Working Document. INDIA: Health Systems Strengthening Assessment, Issues and Options for USAID by David Peters, Kris Oswalt and G. Narayana, February 2002.

CSF02.03

CSF Working Document. User's Guides for UNICEF ChildInfo v3.5 and its adaptations to AfricaInfo, African Girl's Education Initiative (AGEI), BenInfo Benin (English, French), CensusInfo India 2001, DevInfo China (English, Chinese), DevInfo India, DevInfo Maldives, DevInfo Turkmenistan, ESDM Mozambique (English, Portuguese), GSDMA Gujarat India, InfoLAC Latin America & Caribbean (English, Spanish, French, Portuguese), MASEDA Malawi, MENAInfo Middle East and North Africa (English, French, Arabic), MyInfo Myanmar, NepalInfo (English, Nepali), TSED Tanzania.

CSF02.02

CSF Working Document. Database Administration Guide for UNICEF ChildInfo v3.5 and its adaptations.

CSF02.1

CSF Working Document. Subsequently published under the title - Extensions of Syrian animated map from 1994 led to: ANIMATED MAP TIMELINE, SYRIA, by Sandra Arlinghaus, Salma Haidar, and Mark Wilson. Solstice: An Electronic Journal of Geography and Mathematics, Institute of Mathematical Geography, Volume XIII, Number 1, 2002, <http://www.InstituteOfMathematicalGeography.org>

CSF01.4

CSF Working Document. IFPS Benchmark MIS and RH Database, by Kris Oswalt and William Drake at Global Health Council -- 28th Annual Conference; Roundtable Presentation on May 30, 2001

CSF01.3

CSF Working Document. USAID IFPS Benchmark Monitoring Information System. BMIS system documentation and reports for monitoring \$300 million USAID reproductive health project in Uttar Pradesh, India, by Kris Oswalt, 2001.

CSF01.2

CSF Working Document. Subsequently published under the title - WHAT'S AT HOME? SHELTER FOR THE POOR IN LOW-INCOME CITIES, by John D. Nystuen. Solstice: An Electronic Journal of Geography and Mathematics, Institute of Mathematical Geography, Volume XII, Number 2, 2001, <http://www.InstituteOfMathematicalGeography.org>

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CSF Working Document. Subsequently published under the title - Book Review by Richard Wallace of, HIGH TECHNOLOGY AND LOW-INCOME COMMUNITIES: PROSPECTS FOR THE POSITIVE USE OF ADVANCED INFORMATION TECHNOLOGY edited by Donald A. Schön, Bish Sanyal, and William J. Mitchell, MIT Press, 1999. Review in Solstice: An Electronic Journal of Geography and Mathematics, Institute of Mathematical Geography, Volume XII, Number 1, 2001, <http://www.InstituteOfMathematicalGeography.org>

CSF00.3

CSF Working Document. Subsequently published under the title - Potential Applications of Intelligent Transportation Systems for the Dallas/Fort Worth International Airport Ground Transportation System, by C. S. McGee. Project Report for BRW, Inc. as part of Bus Optimization Study.

CSF00.2

EDUCATION FOR ALL 2000, A CONCEPTUAL FRAMEWORK FOR MONITORING EFA (UNICEF), by Kris S. Oswalt.

March 2000.

CSF00.1

CSF Working Document. Subsequently published under the title - A NEIGHBORHOOD INFORMATION SYSTEM WITHIN ANN ARBOR, MICHIGAN, by Sandra L. Arlinghaus and Lloyd R. Phillips, Solstice: An Electronic Journal of Geography and Mathematics, Institute of Mathematical Geography, Volume XI, Number 2, 2000, <http://www.InstituteOfMathematicalGeography.org>

CSF99.3

CSF Working Document. Subsequently published under the title - Attributes of Transit Millage Support: Attitude and Demographic Variables That Predict Transit Support, by C. S. McGee. Final report for AATA Board of Directors.

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CSF Working Document. Subsequently published under the title - Book Review by Richard Wallace of, STATISTICAL TESTS FOR MIXED LINEAR MODELS by André I. Khuri, Thomas Mathew, and Bimal K. Sinha, John Wiley and Sonse, 1998, 352 pages. Solstice: An Electronic Journal of Geography and Mathematics, Institute of Mathematical Geography, Volume X, Number 1, 1999, <http://www.InstituteOfMathematicalGeography.org>

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CSF98.3

CSF Working Documents. Subsequently published under the title - POPULATION-ENVIRONMENT DYNAMICS: A SERIES OF SIX VOLUMES OF STUDENT WORK, NRE545, 1992-1998. Edited by William D. Drake and Sandra L. Arlinghaus (with an introduction by the Editors to each volume). Recent volumes are posted, in varying degrees of completeness, on Drake's website (<http://www-personal.umich.edu/~wdrake>). Volume I: Sectors in Transition, 1992; Volume II: Population-Environment Interaction, 1993; Volume III: Towards Public Policy Strategies, 1994; Volume IV: Transitions in Global Change, 1995; Volume V: Ten Case Studies, 1996; Volume VI: Issues and Policy, 1997. Volume VII: Transitions and Sustainability, 1998.

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CSF97.5

PUNJAB, PAKISTAN, MIDDLE SCHOOLING PROJECT, by William D. Drake, Sandra L. Arlinghaus, Christopher Morrow, final report for Academy for Educational Development and World Bank.

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GIS FOR PLANNERS: HANDS-ON TUTORIAL IN MAPPING INFORMATION SYSTEMS, by Kris S. Oswalt, Malnutrition in South Asia, ACC/SCN Symposium on Poverty and Nutrition, Kathmandu, 17 March 1997.

CSF96.3

SYRIAN MINISTRY OF HEALTH, MATERNAL AND CHILD HEALTH CARE/FAMILY PLANNING, MIS, UNFPA. FINAL REPORT by William D. Drake, Kris S. Oswalt.

Mission 5: Maps on Posters and associated preparation of GIS databases, The Province Database, The District Database, The Health Centre Database, Geocoded Database with Latitude and Longitude, Combining GIS maps with other maps; Directions for conversion from one mapping package to another; and physical posters, by Sandra L. Arlinghaus

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CSF95.3

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CSF95.2

Founding, by Sandra Arlinghaus, of International Society of Spatial Sciences (ISSS) as a virtual arm of CSF: <http://www-personal.umich.edu/~copyright/image/iss.html>

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CSF94.3

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MANAGEMENT INFORMATION SYSTEM DEVELOPMENT: Quarterly Report on USAID VITAMIN A FIELD SUPPORT PROJECT -USAID/India Buy-In for Technical Assistance ICDS Project Implementation. Kris S. Oswalt, Community Systems Foundation, March 1991, 56 pp.

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IEF/MALAWI VITAMIN A PROJECT -MANAGEMENT INFORMATION SYSTEM. By The International Eye Foundation with technical assistance from Community Systems Foundation. 32 pp. Vitamin A Field Support Project (VITAL), International Science and Technology Institute, Inc., Report No. TA-5, February 1991.

CSF90.5

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Appendix VI Funding for ChildInfo 1998-2001¹⁰

CHILDIRINFO BUDGET BY REGION	2002	2001	2000	1999	1998	Total
ROSA	152	116	184	111	202	
EAPRO	73	45	28	26	12	
ESARO	378	197	197	171	6	
MENA	151	154	19	9	10	
WCARO	222	135	11	-	-	
TACRO	155	16	-	-	-	
Subtotal	1,132	663	439	316	230	
Activities Dropped or Postponed	(113)	(176)	(36)	(17)	(20)	
Total Budget for Activities	1,019	487	403	299	210	2,418
CHILDIRINFO BUDGET BY ACTIVITIES	2002	2001	2000	1999	1998	Total
System Devl / User Support / Database Mgt	166	78	42	89	121	
TOT & Technology Transfer	153	67	65	35	-	
Mapping Activities	52	59	24	17	5	
RO Activities & Adaptations	169	91	133	73	25	
CO Tech Support, Training & Adaptations	550	360	153	85	35	
Support to Dissemination and Use	42	8	21	18	44	
Subtotal	1,132	663	439	316	230	
Activities Dropped or Postponed	(113)	(176)	(36)	(17)	(20)	
Total Budget for ChildInfo Activities	1,019	487	403	299	210	2,418
CHILDIRINFO EXPENDITURE BY	2002	2001	2000	1999	1998	Total

¹⁰ A detailed breakdown of UNICEF and UNDP contracts is provided only for the period 1998-2002 which is the period of major expenditure on ChildInfo. A total of \$233,636 was contracted to CSF for the four year period 1994-1997. These contracts were calculated on the basis of inputs so these figures are not as useful in determining expenditure by activity. In total, UNICEF has provided 2, 651,636 to CSF for development and implementation of ChildInfo.

ACTIVITIES						
System Devl / User Support / Database Mgt	167	69	42	90	118	
TOT & Technology Transfer	146	32	65	35	-	
Mapping Activities	53	42	24	17	5	
RO Activities & Adaptations	149	105	107	64	23	
CO Tech Support, Training & Adaptations	460	235	143	85	28	
Support to Dissemination and Use	44	4	21	9	35	
Total Expenditures for ChildInfo Activities	1,019	487	403	299	210	2,418
EXPENDITURE BY COMPONENT	2002	2001	2000	1999	1998	Total
Fees	853	417	329	259	187	
Travel	167	70	74	40	23	
Total Expenditures for ChildInfo Activities	1,019	487	403	299	210	2,418
OTHER UNICEF RELATED EXPENDITURES	2002	2001	2000	1999	1998	Total
UNICEF/UN India - CensusInfo India	35					
UNICEF/UN India - DevInfo Gujarat		89				
UNICEF/UN India - Gujarat GSDMA		39				
UNICEF/UN India - Gujarat Bhuj		22				
Subtotal	35	150	-	-	-	185
Total UNICEF Expenditures	1,054	637	403	299	210	2,603
OTHER UNDP RELATED EXPENDITURES	2002	2001	2000	1999	1998	Total
UNDP Nepal - NepalInfo	30					
UNDP Turkmenistan - DevInfo Turkmenistan	4	16				
UNDP DevInfo China	14	28				
UNDP India - DevInfo India			38	36		
UNDP Maldives - DevInfo Maldives			5	5		
Total UNDP Expenditures	48	44	43	41	-	176

ANNEX 3: Contractual Assessment

Review of UNICEF Contracts with Community Systems Foundation Related to ChildInfo

Assessed by UNICEF's Evaluation Office

December 2002

Acronyms

AGEI	Africa Girls Education Initiative
BenInfo	Customised version of ChildInfo to the database of Benin
CEE/CIS	Region of Central & Eastern Europe, Commonwealth of Independent States & The Baltics
ChildInfo	A database software package with enhanced graphic and mapping
CO	Country Office
CRC	Contract Review Committee
CSF	Community Systems Foundation
DEEDS	UNICEF software
DFAM	Financial and Administrative Division
DHR	Human Resources Division
DPP	Division of Policy and Planning
EAPRO	East Asia Region
ESARO	East and South Africa Region
EO	Evaluation Office
GIS	Geographic Information System
ICDS	Integrated Child Development Services Monitoring System
MDGs	Millennium Development Goals
MENA	Middle East & North Africa Region
NYHQ	New York Headquarters
ITD	Information Technology Division
OIC	Officer in charge
RMT	Regional Management Team
ProMs	UNICEF's Programme management system
RO	Regional Office
ROSA	South Asia Region
TACRO	Latin America and Caribbean Region
TanInfo	Customised version of ChildInfo to the database of Tanzania
TOT	Training of trainers
TSED	Tanzania Socio-economic Database
UN	United Nations
UNICEF	United Nations Children Fund
USAID	International Assistance Agency of the United States
WHO	World Health Organisation

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REVIEW OF UNICEF CONTRACTS WITH COMMUNITY SYSTEMS FOUNDATION RELATED TO ChildInfo

1. Purpose

The purpose of this paper is to examine the contractual arrangements between UNICEF and the Community Systems Foundation (CSF). It explains the circumstances that lead UNICEF to award the first contract to CSF. It provides a list of contracts awarded over the last eight years and analyses the use of contractual resources by UNICEF. It confirms that UNICEF owns the intellectual property of ChildInfo and that there was due compliance with UNICEF regulations concerning the award and management of contracts let to CSF. It looks at the present tri-regional contractual arrangement and proposes measures that could improve the efficiency of the contractual management.

Jean Quesnel, Director of the Evaluation Office prepared this report. Howard Dale of the DPP Strategic Information Unit did the analysis of the use of contractual resources. Many persons were consulted and their contribution is much appreciated. Special thanks goes to William Drake and Kris Oswald of CSF, to Urban Jonsson, Lakshmi Narasimhan Balaji and Roger Pearson of ESARO, Nicolas Pron of WCARO, Ashok Nigam and Deepak Gupta of ROSA, Manuel Buvnich of TACRO, Mercedes Gerville of DHR and Valery Nikolaev of the Supply Section at Headquarters.

2. Background: Evaluation of ChildInfo

In October 2002, Gareth Jones, OIC of the Division of Policy and Planning (DPP) was asked by Carol Bellamy to lead an assessment team consisting of Saad Houry, Chief of the Office of the Executive Director, André Spatz, Director of Information Technology Division and Jean Quesnel. The mandate of the assessment team is to review ChildInfo, assessing:

- the prerequisites for an offer of support to the UN system for tracking achievement progress of the Millennium Development goals (MDGs);
- the technical performance of ChildInfo software at the national and global levels;
- the institutional strength of Community Systems Foundation, the developer and support provider of ChildInfo;
- the present status of the use of ChildInfo applications;
- the resources required to expand the use of ChildInfo world-wide; and the
- need for an inter-agency agreement on data collection of MDG indicators.

Four separate assessment reports have been prepared. Together with this review, they form the basis on which a synthesis report is prepared. Each report is available for consultation. They are:

- DPP/ Strategic Information Unit conducted an assessment by UNICEF staff of the value of ChildInfo and of their satisfaction of the services provided by CSF in November 2002. It consists of findings resulting from a questionnaire completed by country and regional offices of UNICEF. The interest and rapid spread of ChildInfo can be noted from the fact that 79 offices responded to this recent survey compared to 24 offices which responded to a similar ChildInfo questionnaire administered in 2001 by the Evaluation Office.
- On behalf of NYHQ/ITD, George Ritter carried out a technical assessment of the software used for ChildInfo. He also visited the headquarters of the Community Systems Foundation (CSF) in Ann Arbor, Michigan and the New Delhi based CSF operations. Raul Castillo, Regional IT Officer participated in the visit to New Delhi.
- Jean Quesnel with the assistance of a consultant, Doug Daniels, from a firm specializing in organizational assessment, conducted the review of the institutional capability of Community Systems Foundation. The consultant visited the headquarters in Ann Arbor with J. Quesnel and then assessed the New Delhi operations of CSF and Logiciel in conjunction with the visit of the ITD assessment team.

The conclusions of the UNICEF staff assessment and the institutional capability of CSF were reviewed at the end of November in Nairobi with CSF and UNICEF representatives from five Regional Offices and three Country Offices. The representatives were the focal points of their respective office concerning the coordination of the development, customisation and application of ChildInfo.

3. Accountability within UNICEF for ChildInfo

In 1996, UNICEF's management accountability of the project moved from the India Country Office to the ROSA Regional Office. The contract became a regional contract with management at the Kathmandu regional office. Also, initiatives undertaken in a number of countries of Africa were included in the consolidated contract managed by ROSA. These initiatives related to the ChildInfo database, its development and training related activities.

Following consultations held in 2000 at the UNICEF headquarters and discussions amongst the regional directors, a ChildInfo contract for three regions (WCARO, MENA, ESARO) was consolidated in a contract managed from the Nairobi regional office. A steering committee consisting of members from the three regional offices ensured the collective management in monitoring of the contract. ESARO provided the secretariat function for that purpose.

At present, UNICEF Regional Offices are responsible for the development and maintenance of ChildInfo in their respective region. In 2002, three Regional Offices

awarded contracts to CSF. ESARO coordinates the contractual needs of WCARO and MENA representing 44 countries. ROSA likewise coordinates the need of EAPRO representing 24 countries. TACRO covers the countries of Latin America and the Caribbean. The following table 1 provides the list of countries. Coordination among the Regions is ensured by an ad hoc committee of Regional Directors and by the ChildInfo Focal Points Group.

During the meeting of the Regional Focal Points on ChildInfo, held in Nairobi in November 2002, there was a consensus that :

- In the next two years, training and technical support in monitoring related to ChildInfo should become the responsibility of each regional office, with software development and co-ordination remaining the work of an inter-regional / NYHQ group with CSF.
- The Regional and Country offices have accountability to ensure efficient and effective programme implementation. In order to ensure continuation of the work in countries in 2003, the usual annual planning activity is to continue with contracting (one per region) to start on March 1st. This implies sending contracts to CRC in February. Meanwhile, current contracts will be extended to finish work not carried out in 2002.
- The work initiated in NY for monitoring capacity on global goals should continue apace and has full commitment of regional offices. During 2003 the completion of a global monitoring plan incorporating ChildInfo is anticipated and work carried out through the regional contracts will have the minimum essential elements of field level work to make the global process successful.
- Regional Directors will meet again in January on ChildInfo to: agree to a combined workplan (but separate regional contracts with CSF) for ChildInfo; agree on a mechanism for oversight of implementation of the workplan; and prepare to contribute to the broader discussion on ChildInfo in the GMT.
- As the global plan is established, this ad-hoc meeting in January should be developed into a Regional/HQ committee chaired by Deputy Executive Director, Programmes, meeting twice a year around the Executive Board meetings.
- A steering group of people designated by Regional Directors - usually Regional Planning or M&E Officer - should meet twice a year (once in conjunction with the global PME meeting, and once in a regional office) to assess progress (implementation and payments), make adjustments, and plans.

CHILD INFO
TABLE 1

No.	Country/Region	Region	Product	Adaptations	Training	UN/Govt
1	UNICEF ESARO	ESAR	Child Info v3.5		1999-2000	
2	African Union	AFRICA	Child Info v3.5	Africa Info v1.0	Y	Y
3	UNICEF ESAR Education	AFRICA	Child Info v3.5	AGEI v1.0	Y	
4	UNICEF MENARO	MENA	Child Info v3.5	MENA Info v1.0,Arabic	2001-2002	
5	UNICEF WCARO (Cotonou for Abj)	WCAR	Child Info v3.5		2002	
6	UNICEF ROSA	ROSA	Child Info v2.0-v3.5	ROSA Atlas Database	1998-2002	
7	UNICEF EAPRO	EAPR	Child Info v3.5	EAPRO Atlas Database	2000-2002	
8	UNICEF TACRO	TACR	Child Info v3.5	InfoLAC (Spanish,Portuguese)	2002	
9	UNICEF CEE/CIS	CEE/CIS	Child Info v3.5		2003?	
10	Cambodia	EAPR	Child Info v2.0		Regional trg	
11	China	EAPR	ChildInfo v3.5	DevInfo China v1.0(Chinese)	Y	Y
12	DPR Korea	EAPR	Child Info v2.0		Y	
13	Indonesia	EAPR	Child Info v2.0		Regional trg	
14	Lao PDR	EAPR	Child Info v3.5		Q4-2002	2003?
15	Malaysia	EAPR	Child Info v2.0		Regional trg	
16	Mongolia	EAPR	Child Info v2.0-v3.5		Q4-2002	
17	Myanmar	EAPR	Child Info v3.5	MyInfo v1.0	Q4-2002	Y
18	Pacific (Fiji)	EAPR	Child Info v3.5	Fiji info (proposed)	Y	Y
19	Papua New Guinea	EAPR	Child Info v2.0		Regional trg	
20	Philippines	EAPR	Child Info v2.0-v3.5		Regional trg	
21	Thailand	EAPR	Child Info v3.5	Thai version	Y	Y
22	Vietnam	EAPR	Child Info v3.5		Q4-2002	
23	Angola	ESAR	Child Info v2.0		Regional trg	
24	Botswana	ESAR	Child Info v3.5		Y	
25	Burundi	ESAR	Child Info v3.5		Y	Y
26	Comoros	ESAR	Child Info v2.0		Regional trg	
27	Eritrea	ESAR	Child Info v3.5		Y	Y
28	Ethiopia	ESAR	Child Info v3.5		Y	
29	Kenya	ESAR	Child Info v3.5		Y	Y
30	Lesotho	ESAR	Child Info v3.5		Y	
31	Madagascar	ESAR	Child Info v2.0		Y	
32	Malawi	ESAR	Child Info v3.5	MASEDA v1.0	Y	Y
33	Mozambique	ESAR	Child Info v3.5	ESDEM v1.0 (Portuguese)	Y	Y
34	Mauritius	ESAR	Child Info v2.0-v3.5		Y	Y
35	Namibia	ESAR	Child Info v3.5		Y	
36	Rwanda	ESAR	Child Info v3.5		Y	2003?
37	Somalia	ESAR	Child Info v3.5		Y	
38	South Africa	ESAR	Child Info v2.0-		Y	Y

			v3.5			
39	Sudan (OLS)	ESAR	Child Info v3.5		Y	
40	Swaziland	ESAR	Child Info v2.0		Y	
41	Tanzania	ESAR	Child Info v2.0- v3.5	TSED v1 & 2,HBS v1	Y	Y
42	Uganda	ESAR	Child Info v3.5		Y	Y
43	Zambia	ESAR	Child Info v3.5		Y	2003?
44	Zimbabwe	ESAR	Child Info v3.5		Y	
45	Djibouti	MENA	Child Info v3.5		Q4-2002	
46	Egypt	MENA	Child Info v3.5		Y	
47	Gulf Area Office	MENA	Child Info v3.5		Q4-2002	Y
48	Iran	MENA	Child Info v2.0- v3.5		Y	
49	Iraq N	MENA	Child Info v3.5		Y	
50	Iraq S	MENA	Child Info v3.5		Y	
51	Jordan	MENA	Child Info v3.5		Y	
52	Lebanon	MENA	Child Info v3.5		Y	
53	Libya	MENA	Child Info v2.0		Regional trg	
54	Oman	MENA	Child Info v3.5		Y	
55	Sudan	MENA	Child Info v3.5		Y	
56	Syria	MENA	Child Info v3.5		Y	2003?
57	Tunisia	MENA	Child Info v2.0- v3.5		Regional trg	2003?
58	Yemen	MENA	Child Info v3.5		Y	
59	Afghanistan	ROSA	Child Info v2.0- v3.5		Q1-2003?	
60	Bangladesh	ROSA	Child Info v2.0- v3.5		Q4-2002	
61	Bhutan	ROSA	Child Info v2.0- v3.5		Q4-2002	Y
62	India	ROSA	ChildInfo v2.0	DevInfo India v1.0	Y	Y
63	India	ROSA	Child Info v2.0- v3.5	CensusInfo India 2001 v1.0	Q4-2002	Y
64	India State-Emergency	ROSA	ChildInfo v2.0	DevInfo Orissa v1.0	Y	Y
65	India State-Emergency	ROSA	ChildInfo v2.0	GSDMA Gujarat v1.0	Y	Y
66	Maldives	ROSA	Child Info v2.0- v3.5	DevInfo Maldives v2.0	Y	Y
67	Nepal	ROSA	Child Info v3.5	NepalInfo v1.0 (Nepali)	Y	Y
68	Pakistan	ROSA	Child Info v2.0- v3.5		Q1-2003?	
69	Sri Lanka	ROSA	Child Info v2.0- v3.5		Y	
70	Mexico	TACR	Child Info v2.0- v3.5		Y	Y
71	MOSAICO for South Cone	TACR	Child Info v3.5	MOSAICO (proposed)	Y	2003?
72	Benin	WCAR	Child Info v3.5	BenInfo v1.0- v2.0(French)	Y	Y
73	Ghana	WCAR	Child Info v3.5	GhanaInfo (proposed)	Y	Y
74	Liberia	WCAR	Child Info v3.5		Q4-2002	
75	Mauritania	WCAR	Child Info v3.5		Q4-2002	
76	Niger	WCAR	Child Info v2.0- v3.5	ChildInfo Niger	Q4-2002	
77	Nigeria	WCAR	Child Info v3.5		Q4-2002	
78	Sierra Leone	WCAR	Child Info v3.5		Q4-2002	
79	The Gambia	WCAR	Child Info v3.5		Q4-2002	
80	Turkmenistan	CEE/CIS		DevInfo Turkmenistan	Y	Y

4. Brief history of ChildInfo

The experience from the Integrated Child Development Services (ICDS) led to the eventual creation of ChildInfo. ICDS was programme of the Government of India collecting a number of indicators related to nutrition and health. It was funded by USAID and UNICEF was a partner of this national programme since its inception in 1975. ChildInfo was originally conceived in India as a Nutritional database using the conceptual framework of Nutrition to allow information on a variety of indicators based on the conceptual framework for decentralized decision making.

In 1995 ChildInfo was chosen as the platform on which to start building a South Asia region-wide database managed collaboratively between ROSA and country offices. The project started with the development of a core list of indicators for potential use in a regional atlas publication. Data was collated on key indicators through a combination of regional teamwork involving UNICEF country offices in South Asia and through a search of published databases. The eventual collection was published in 1997 as the Atlas of South Asian Children and Women, issued also as part of the ChildInfo version 1.01 CD-ROM.

The task of making a first compilation of the database gave the region-wide UNICEF team a first hand look at collective capabilities and formed the basis for a regional task in 1998 aimed at further building of UNICEF's region-wide assessment capabilities. This led to the expansion of the work into a formal regional workplan task under the guidance of the South Asia regional management team (RMT). The Iran country office and the EAPRO regional office joined the task. At the outset the regional monitoring and evaluation officer (Roger Pearson) was assigned to coordinate the task with the close advice of the regional director (Urban Jonsson), the regional planning officer (David Parker) and the regional education officer (Jim Irvine).

In 1999, UN country teams in India and Maldives decided to adopt the programme model for the UN common country database. At present, some 80 country offices have shown an interest in using ChildInfo. The tool is currently used by five Regional Offices and by some 60 Country Offices. Ten countries have customised ChildInfo reflecting local ownership of their respective database.

5. Initial ChildInfo Contract

Starting in the early 1990's in the nutrition and child development section of UNICEF Country Office in India, a windows version of the DEEDS software was developed supported under contract by Community Systems Foundation. It was called ChildInfo version 1.0. The aim of ChildInfo was to codify information relevant to the nutrition situation in India and facilitate the export of this information to commercial graphing, tabulating and mapping software.

Several leading companies in India were considered for the project. These included : NIIT, Tata Consultancy Services, Price Waterhouse and Community Systems Foundation. While the first three are well known India based Software companies with known quality softwares to their credit, the last one was a non-profit organization based in Ann Arbor, Michigan already doing work with a key government department under the USAID ICDS projects in Maharashtra and Gujarat. After detailed discussions on the proposal stage, the NIIT and TIS dropped out of the race as they felt that the work was too small for them and did not send any representatives further for the various briefing sessions that were held.

UNICEF Country Office in India was working with two IT companies in India. Price Waterhouse developed a number of systems for the Country Office such as the Personnel Monitoring System, Inventory System, Invitation and Meetings system etc... Tata Consultancy Services developed for UNICEF a work planning and programme management system. Initial discussions with these two consulting firms suggested that none had the requisite experience in social indicators database management. Nor had they worked on systems such as the one with linkages to presentation on Havard Graphics and appropriate GIS based mapping system. Further, it was also realised that given the limited access to maps in the country, most firms in India did not have access to maps for digitization purposes.

Community Systems Foundation on the other hand, had already developed a working MIS linkage to Havard Graphics and maps for ICDS. They already had credibility with two major partners of UNICEF's Nutrition Section: USAID and the Department of Women and Child Development - a nodal department for UNICEF. CSF had also access to maps in an environment, which was highly restrictive (until 1996). Although UNICEF in India had no direct experience in working with CSF, there were a number of UNICEF project officers in New Delhi and state offices, who had worked with CSF when they were implementing the USAID supported monitoring system for ICDS. Further, UNICEF India also learnt that CSF had done good work in implementing a GIS based monitoring system for the Guineaworm eradication programme in Africa supported by UNICEF and WHO.

Given the above reasons, UNICEF India preferred to work with CSF based on the comparative advantage that CSF had over the other two firms considered. CSF prior experience in working with USAID and the Government of India, their proven experience in designing databases and their practical knowledge of linking databases to graphs and maps were critical factors in CSF's favour.

The first contract with CSF envisaged the costing of items based on the inputs including various staff and technical capacity at CSF. It led to the establishment of a unit of contracted persons within the UNICEF office in India. The project involved producing a database based on information on various nutritional and health indicators coming from monitoring reports and converting them into simple tables, graphs and maps that will be used by programme managers. CSF was already using Foxpro for DOS (version 2.0) and had the relevant digitized maps for the specific districts of the USAID assisted project

and therefore had a good grasp of the requirements for the proposed NutritionInfo project. It was also realized that they had successfully implemented earlier for USAID and UNICEF in other parts of the world a Global system for GIS based information system for Guineaworm eradication.

6. Contractual Arrangement

CONTRACTUAL REGIME

UNICEF awards contracts to CSF by making use of the Special Service Agreements (SSA). SSAs are governed by administrative instructions issued in 1991 under the authority of the Director of the Division of Human Resources. The authority to award SSAs is delegated to Regional Directors however subjected to the conditions and limitations. Moreover awarding of SSAs must be in accordance with UNICEF's financial rules and regulations.

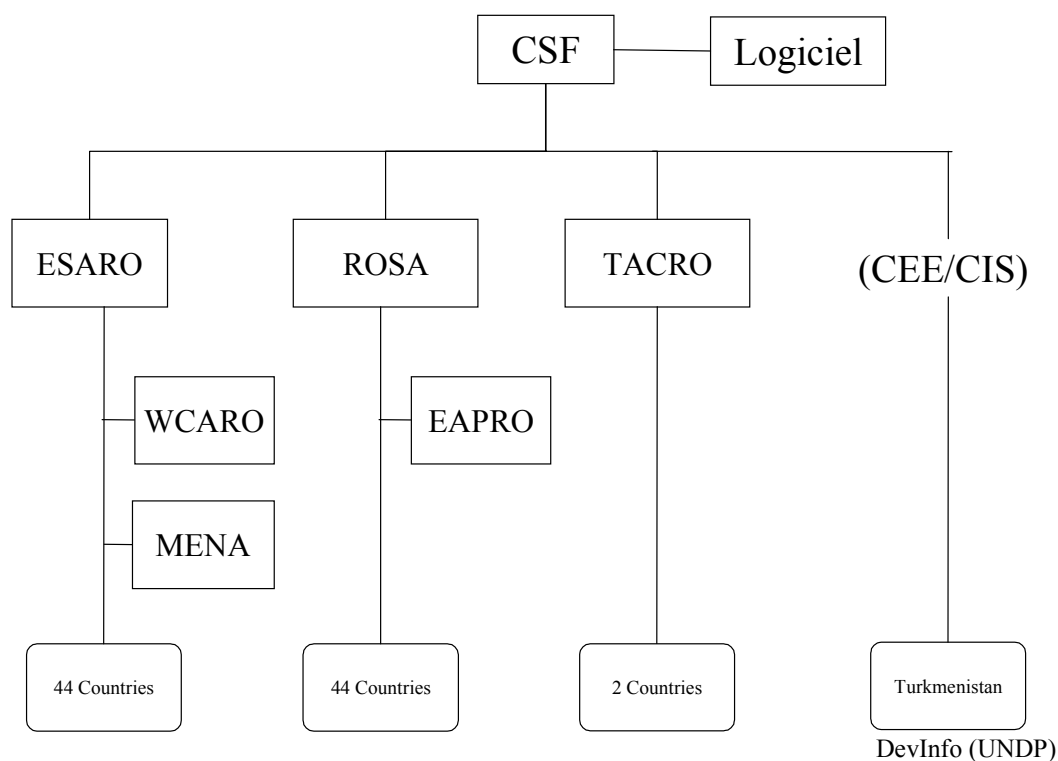
The basic conditions and limitations governing SSAs awarded to an institutional contractor are as follows. If the contract exceeds US\$10,000 there is a requirement for a competitive tendering process from at least three contractors. Furthermore there is a need to obtain advice from the Contract Review Committee (CRC) if the contract exceeds US\$40,000.

Review of the contract documentation shows that the regional offices have complied with the rules and regulations governing the award of SSAs.

PRESENT CONTRACTUAL ARRANGEMENT

During 2002, CSF signed three contracts with UNICEF. The three regional offices that awarded a contract are ESARO, ROSA, and TACRO. ESARO managed the assignments undertaken in Africa while ROSA acted likewise for Asia. TACRO covered the countries of Latin America and the Caribbean. In the case CEE/CIS region, CSF signed an agreement with UNDP for an assignment in Turkmenistan.

ESARO coordinates the contractual needs of WCARO and MENA representing 44 countries. ROSA likewise coordinates the need of EAPRO representing 24 countries. As described, the figure below illustrates the present contractual arrangement.



ADVANTAGES OF THE PRESENT CONTRACTUAL ARRANGEMENT

The main advantage of the present contractual arrangement is that it responds to the needs expressed by each country and regional office. It is a demand driven contract. Services are rendered according to predetermined outputs and payments are made subsequently. In this arrangement, the contractor assumes all the risks.

DISADVANTAGES OF THE PRESENT CONTRACTUAL ARRANGEMENT

Upon examination of the present contractual arrangement many disadvantages become evident.

- It is not a cost-effective regime.
 - UNICEF issues multiple contracts. This represents duplication in administrative labor.
 - It is difficult for UNICEF to ensure an overall coordination. Each region tends to manage only according from its own needs.
 - CSF has to allocate 15% of its resources for coordinating and scheduling responses to client demands.

- It is an onerous regime for CSF.
 - Payments are based on the delivery of outputs. Postponements and cancellations by clients are not penalized. This results in difficult cash flow planning for CSF.
 - CSF had to sell its office building in order to create sufficient cash reserve to cope with the unpredictable cash flow received from UNICEF.
 - Payment delays caused by UNICEF have been more or less habitual. This is due to UNICEF's slow coordination in guaranteeing the availability of funds and the certification of service rendered.

- It does not foster a strategic management of ChildInfo
 - Since the contract is demand driven it tends to cater to short-term needs of the country and regional offices.
 - The scope of ChildInfo has become one of a global activity. However there are three UNICEF contracts managed by three different regional offices. Overlapping activities may occur. The global strategic approach is under-resourced and neglected by UNICEF.

- It is demanding for UNICEF to harmonize its overall management of the contracts
 - It is difficult to include the full dimension of the CSF contracts in accordance to the management discipline instituted in the ProMS.
 - The authority of a particular regional CRC may be pre-empted by decisions of another regional CRC. This was the case when one CRC agreed to a 5% increase of the fees over the last contract.
 - Scheduled contract activities planned in one Region may be upset by decisions of cancellation or postponement taken by another region.
 - It is not always very clear how inter-regional travels are monitored and how payments are proportioned.

7. Use of contractual resources

SOURCE OF INFORMATION

The information contained in this analysis is taken from Appendix VI Funding for ChildInfo 1998-2001 of "Community Systems Foundation. Institutional Organization Assessment", (Universalia, November 29 2002). This appendix provides a detailed breakdown of UNICEF and UNDP contracts for the period 1998-2002 which is the period of major expenditure on ChildInfo. It may be found as Annex 1 of this report.

A total of \$233,636 was contracted to Community Systems Foundation (CSF) for the four-year period 1994-1997. These contracts were calculated on the basis of inputs so

these figures are not as useful in determining expenditure by activity. In total, UNICEF has provided \$2,651,636 to CSF for development and implementation of ChildInfo."

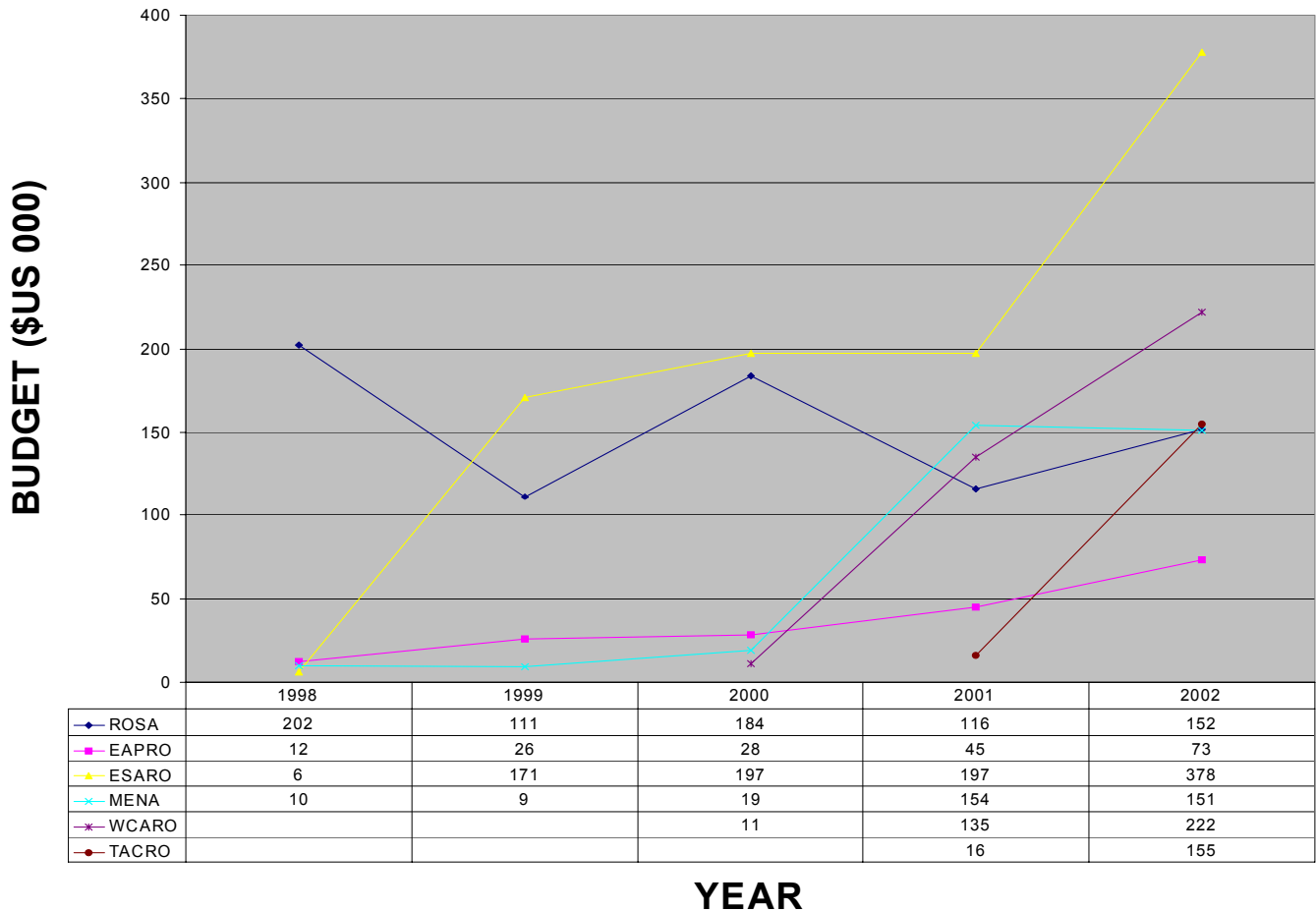
USE OF RESOURCES BY REGION

Figure 1 presents ChildInfo costs by region (i.e. budgeted costs not including activities dropped or postponed).

WCARO and TACRO have actively pursued ChildInfo only in the past two years so it is impossible to determine any real trend in budgets from these regions. This is also largely true for MENA where, until comparatively recently, only Iran was using ChildInfo. ChildInfo is not yet in use in CEE/CIS and the Baltic region so no figures are available. ROSA and EAPRO have been using ChildInfo longer than the other regions. ESARO began full implementation of ChildInfo in 1999.

MENA budgets increased to \$154,000 as full ChildInfo implementation began in 2001 and have remained at much the same level for 2002. The TACRO budget for 2002 is \$155,000

**FIGURE 1: CHILDIRFO COSTS BY REGION,
1998-2002**



ROSA budgets have increased and decreased during the period in question. They have never been less than \$100,000 and have never been higher than slightly over \$200,000.

EAPRO budgets have shown a steady increase but have never been higher than the 2002 level of \$73,000.

The most dramatic increase has been in ESARO. As ESARO moved to implement ChildInfo during 1998-1999 the budgets rose from \$6,000 to \$171,000. They remained in the \$175,000-\$200,000 range for the next three years (1999-2001). The budget for 2002 is \$378,000 - a 48% increase over 2001.

USE OF RESOURCES BY CATEGORY

For budget purposes (CSF) groups ChildInfo budgets into six main categories (the descriptions are taken from the 2002 UNICEF/CSF institutional contracts):

- **System development/user support/database management.** Covers the ChildInfo helpdesk and ChildInfo lab for responses to questions about the software system. Also covers data management services to assist in uploading data and in answering questions related to the process of uploading and verifying data.
- **Training of trainers and technology transfer.** Covers technical training provided at the regional and country levels for focal points and data users/administrators.
- **Mapping activities.** Covers establishing a digital map for countries within the region in question and/or maintaining maps if they already exist. Since Country office activities below include technical support for digital maps lower than the 2nd administrative level we assume that this category refers to maps down the second administrative level.
- **Regional office activities and adaptations.** Includes such activities as the development of advocacy materials; conducting regional workshops; strengthening regional databases etc.
- **Country office technical support, training and adaptations.** Includes establishing ChildInfo, establishing government/UN common databases using the ChildInfo database model, training for UNICEF programme staff, training for counterparts and partners, technical support for digital maps (lower than the 2nd administrative level), technical support for data management.
- **Support to dissemination and use.** Includes inputs to technical meetings with UNICEF NYHQ, other UN agencies and partners to support the dissemination and use of the ChildInfo database system and its adaptation for use as a social development database (UN common database) at country level.

The section on activities in the CSF/UNICEF Institutional Contract also contains the following paragraph:

"Further adaptation of ChildInfo Database Model to Government/UN Requirements. At country level, if the government, UN agencies and/or other partners opt to further adapt the ChildInfo database model for their specific requirements, and the funding of this activity is shared among the interested parties (not funded only by UNICEF), then this activity would be carried out under a separate agreement between the parties and CSF."

Figure 2 shows ChildInfo budgets (for all regions) broken down by year and category in terms of absolute amounts. Figure 3 shows ChildInfo budgets broken down by year and category as a percentage of the total budget for the year in question.

System Development/User Support/Database Management budgets declined from \$121,000 in 1998 to \$42,000 in 2000 and then increased again to \$166,000 in 2002. This is probably caused by two factors: 1) three additional regions (MENA, WCARO, TACRO) adopting ChildInfo during the last few years; 2) additional costs associated with the production of version 3.5 of ChildInfo. As a percentage of the total budget this category has declined from 53% of the total in 1998 to around 15% in 2002.

Training of trainers and technology transfer budgets have increased steadily over the years to their present highest level of \$153,000. To some extent this might be attributed to the new regions adopting ChildInfo. From 1998-1999 this category increased from 2% to 11% of the total budget. It has now settled into the 10%-15% of total budget range.

Mapping activities. Again a steady increase with a slight dip between 2001 (\$59,000) and 2002 (\$52,000). Has never been more than 9% of total budget.

Regional Office activities. Increased between 1998 and 2000 to \$133,000, then declined in 2001 to \$91,000 and increased again to \$169,000 in 2002. Between 1998 and 2000 increased from 11% of total budget to 30%. Has since declined to 15%.

Country Office Technical Support, Training and Adaptations. Increased steadily from \$35,000 in 1998 to \$153,000 in 2000 followed by a larger increase to \$360,000 in 2001 and to \$550,000 in 2002. Of all categories, this one shows the greatest increase. From 15% of total budget in 1998 this category increased to 54% in 2001 and then remained at 49% in 2002.

Support to Dissemination and Use. Declined from \$44,000 in 1998 to \$8,000 in 2001. This was followed by an increase to \$42,000 in 2002. This category has declined from 19% of total budget in 1998 to 4% in 2002.

FIGURE 2: ChildInfo Budget by Activity (% OF TOTAL)

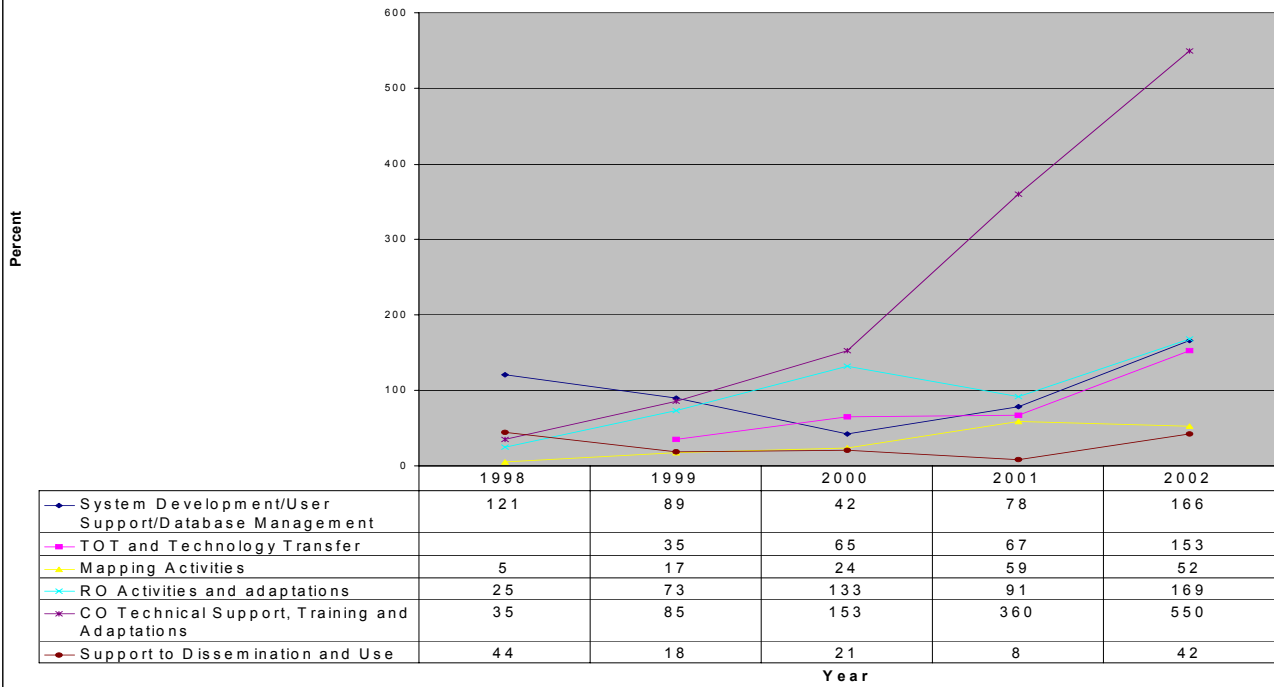
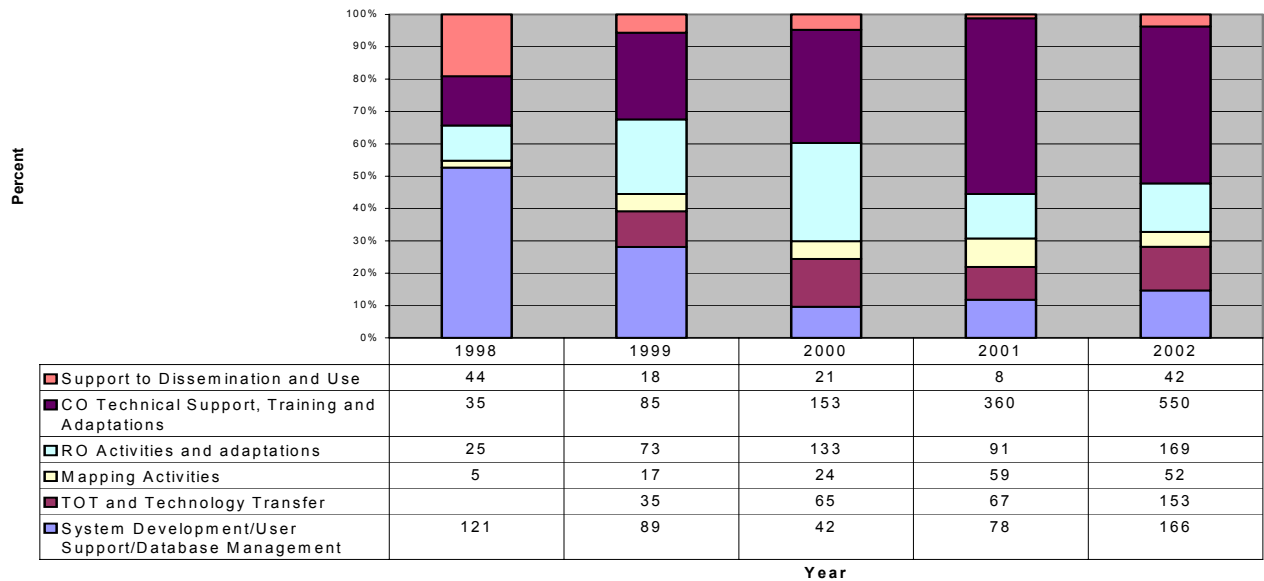


FIGURE 3: ChildInfo Budget by Activity (% OF TOTAL)



Unit Costs

In the 2002 CSF/UNICEF Institutional Contract CSF provides a table of Unit Costs used in producing ChildInfo budget estimates. Costs are given for different types of activities and for different types of offices: Regional; extra large country office; large country office; medium country office; small country office; extra small country office. This table is reproduced in Table 2 below.

TABLE 2: CHILDINFO UNIT COSTS

Code	Unit Cost Description	Regional	XL	L	M	S	XS
A.	System Development and Technical Support						
UC01	ChildInfo Database System Development	15,860.00					
UC02	Adaptation of CI to Regional Programme-Basic Package	18,450.00					
UC03	Adaptation of CI to Regional Programme-Extended Package	31,730.00					
UC04	Local language extension	9,700.00	9,700.00	9,700.00	9,700.00	9,700.00	9,700.00
UC05	Coordination with partners	3,600.00					
UC06	Adaptation of CI to government-UN common database-basic package		10,560.00	8,450.00	7,040.00	4,220.00	2,460.00
UC07	Adaptation of CI to government-UN common database-extended package		19,670.00	15,730.00	13,110.00	7,870.00	4,590.00
B.	User support services and database management						
UC08	Helpdesk services	5,120.00					
UC09	Documentation and Replication	6,300.00					
UC10	Data management technical support	4,700.00					
C.	Training and Technology Transfer						
UC11	Training materials development	4,330.00	4,330.00	4,330.00	4,330.00	4,330.00	4,330.00
UC12	Technical orientation and demonstration	1,550.00	1,550.00	1,240.00	1,030.00	620.00	360.00
UC13	User Training	9,680.00	9,680.00	7,740.00	6,450.00	3,870.00	2,260.00
UC14	User, Admin and data management training	13,530.00	13,530.00	10,820.00	9,020.00	5,410.00	3,160.00
UC15	Advanced Administrator training	9,720.00					
UC16	User refresher training	5,490.00	5,490.00	4,390.00	3,660.00	2,200.00	1,280.00
UC17	User, admin and data management refresher training	9,650.00	9,650.00	7,720.00	6,430.00	3,860.00	2,250.00
UC18	Technical support for study tour	5,490.00	5,490.00	4,390.00	3,660.00	2,200.00	1,280.00
UC19	Advocacy materials	14,950.00	13,590.00	10,870.00	9,060.00	5,440.00	3,170.00
D.	Mapping Activities						
UC20	Mapping - Establish regional map-2nd admin level	15,740.00					
UC21	Mapping - Digitize third to fourth admin level		177,000.00	56,640.00	11,800.00	7,080.00	4,130.00
UC22	Mapping - Digitize point infrastructure		141,600.00	45,320.00	9,440.00	5,660.00	3,300.00
UC23	Mapping - Integrate digital 3rd-4th admin levels		7,965.00	8,500.00	3,540.00	2,120.00	1,240.00
UC24	Mapping - Integrate point infrastructure		6,375.00	6,800.00	2,830.00	1,700.00	990.00
UC25	Mapping - Maintain regional map-2nd admin level	4,720.00					
UC26	Mapping - Maintain country map-3rd-4th admin levels		123,900.00	39,640.00	8,260.00	4,960.00	2,890.00

8. Ownership of ChildInfo

INTELLECTUAL PROPERTY

The Special Service Agreements signed between UNICEF and CSF contain a standard clause as conditions of services. It relates to the intellectual property concerning ChildInfo as follows:

"The United Nations shall be entitled to all property rights including but not limited to patents, copyrights, and trademarks, with regard to material which bears a direct relation to, or is made in consequence of, the services provided to the Organization by the contractor. At the request of the United Nations, the contractor shall assist in securing such property rights and transferring them to the Organization in compliance with the requirements of the applicable law. At the request of the United Nations, the contractor shall take all necessary steps, execute all necessary documents and generally assist in securing such property rights and transferring them to the Organization in compliance with the requirements of the applicable law.

Title to any equipment and supplies which may be furnished by the United Nations shall rest with the United Nations and any such equipment shall be returned to the United Nations at the conclusion of this contract or when no longer needed by the contractor. Such equipment, when returned to the United Nations, shall be in the same condition as when delivered to the contractor, subject to normal wear and tear."

On November 16, 2002 CSF and Logiciel signed a Memorandum of Understanding clarifying that:

"The ownership of intellectual property rights to the ChildInfo software source code shall be with the United Nations Children's Fund (UNICEF), including digital maps developed under the ChildInfo project for ChildInfo and the software source code for adaptations of ChildInfo technologies for UN partners and government (DevInfo and other similar adaptations). This agreement covers all versions of the ChildInfo software developed for UNICEF from version 1.0 through version 4.0 (to be developed in 2002)."

SOURCE CODES

These are the software programming codes. The ChildInfo source codes are the property of UNICEF. For practical reasons, the source codes are only kept with one of the UNICEF offices. They are in the custody of ROSA.

There has been some discussion about how to share the ChildInfo technology with other UN organizations when the software source codes remain in the keeping of UNICEF. The key issue is that if the software source codes were given freely to all who ask, the ChildInfo database system and related systems, like DevInfo would not be uniform. Other programmers could change the software codes and soon the systems in use would not be the same from one user to the next. This would create a unmanageable software maintenance problem.

The UNICEF position is that the ChildInfo system and products adapted from the system can be freely distributed to UN / govt. agencies, but that the source code would remain in the custody of UNICEF.

There may be specific agreement to customize the ChildInfo software to specific needs. In order to respond to such requests there is no need to share the source code. Such agreements were successfully implemented in the case of DevInfo, AfricaInfo, AGEI and many country versions of ChildInfo use. This was never perceived as a problem by any of our partners at country level.

OWNERSHIP OF THE DATABASE

At the country office level, UNICEF office(s) and its UN partners have the right to freely distribute ChildInfo CDs (which is not just the software, but the software together with all the databases). However, this should not be confused with variations or software enhancements like DevInfo, TSED, Beninfo, TanInfo etc., which might have additional rights to other UN agencies, government partners; in such cases, a joint agreement of the partners might be required.

9. Recommendations

The recommendations are:

- a) A global committee consisting of Regional Directors and concerned HQ Directors under the chairmanship of a Deputy Executive Director, should be established to oversee global planning and implementation
- b) A multi-year global management plan should be developed and appropriate resourcing ensured.
- c) A global contract should be awarded to Community System Foundation, taking into account the demands emanating from the field.
- d) In order to avoid duplication of administrative efforts and delays in contract management, UNICEF should have one focal point responsible for the administration of the contract with CSF. This focal point should have the full delegated authority to make decisions, authorise contractual obligations and ensure prompt payment upon services rendered. .
- e) A steering group of officers designated by their respective Directors should meet (at least twice a year) to prepare the annual plans, assess progress, make adjustments to the implementation plan

Annex I Funding for ChildInfo 1998-2001

CHILDINFO BUDGET BY REGION	2002	2001	2000	1999	1998	Total
ROSA	152	116	184	111	202	
EAPRO	73	45	28	26	12	
ESARO	378	197	197	171	6	
MENA	151	154	19	9	10	
WCARO	222	135	11	-	-	
TACRO	155	16	-	-	-	
Subtotal	1,132	663	439	316	230	
Activities Dropped or Postponed	(113)	(176)	(36)	(17)	(20)	
Total Budget for Activities	1,019	487	403	299	210	2,418

CHILDINFO BUDGET BY ACTIVITIES	2002	2001	2000	1999	1998	Total
System Devl / User Support / Database Mgt	166	78	42	89	121	
TOT & Technology Transfer	153	67	65	35	-	
Mapping Activities	52	59	24	17	5	
RO Activities & Adaptations	169	91	133	73	25	
CO Tech Support, Training & Adaptations	550	360	153	85	35	
Support to Dissemination and Use	42	8	21	18	44	
Subtotal	1,132	663	439	316	230	
Activities Dropped or Postponed	(113)	(176)	(36)	(17)	(20)	
Total Budget for ChildInfo Activities	1,019	487	403	299	210	2,418

CHILDINFO EXPENDITURE BY ACTIVITIES	2002	2001	2000	1999	1998	Total
System Devl / User Support / Database Mgt	167	69	42	90	118	
TOT & Technology Transfer	146	32	65	35	-	
Mapping Activities	53	42	24	17	5	
RO Activities & Adaptations	149	105	107	64	23	

CO Tech Support, Training & Adaptations	460	235	143	85	28	
Support to Dissemination and Use	44	4	21	9	35	
Total Expenditures for ChildInfo Activities	1,019	487	403	299	210	2,418

EXPENDITURE BY COMPONENT	2002	2001	2000	1999	1998	Total
Fees	853	417	329	259	187	
Travel	167	70	74	40	23	
Total Expenditures for ChildInfo Activities	1,019	487	403	299	210	2,418

OTHER UNICEF RELATED EXPENDITURES	2002	2001	2000	1999	1998	Total
UNICEF/UN India - CensusInfo India	35					
UNICEF/UN India - DevInfo Gujarat		89				
UNICEF/UN India - Gujarat GSDMA		39				
UNICEF/UN India - Gujarat Bhuj		22				
Subtotal	35	150	-	-	-	185
Total UNICEF Expenditures	1,054	637	403	299	210	2,603

OTHER UNDP RELATED EXPENDITURES	2002	2001	2000	1999	1998	Total
UNDP Nepal - NepalInfo	30					
UNDP Turkmenistan - DevInfo Turkmenistan	4	16				
UNDP DevInfo China	14	28				
UNDP India - DevInfo India			38	36		
UNDP Maldives - DevInfo Maldives			5	5		
Total UNDP Expenditures	48	44	43	41	-	176

ANNEX 4: Technical Evaluation of ChildInfo

Assessed by UNICEF's Information Technology Division

(19 December 2002)

Part 1: Executive Summary

❖ Terms of Reference for the technical evaluation

The terms of reference for this assignment were to conduct a technical assessment of the ChildInfo software package. The assessment covers topics falling into the following categories:

In summary, ChildInfo is working well within the present limited install base. In order to be rolled out at the global level to track a common set of indicators worldwide, it would require changes to the software, help desk, and support structures.

Determine if the ChildInfo development approach follows sound systems development practices.

CSF uses a cyclical prototyping methodology. This works well for projects when the development team has frequent interaction with the end user. This will not work well for a software project that is outsourced. Future versions of ChildInfo should follow a more rigid development lifecycle with agreed on scope and defined deliverables.

Review the technical documentation.

CSF provided the evaluation team with a copy of all the technical documentation. This documentation is of good quality. The true accuracy of the documentation can only be evaluated during a structured code review.

Discuss the issue of software 'ownership'.

CSF says that UNICEF 'owns' all of the source code, maps, training materials, and documentation. However, UNICEF did not identify a formal custodian for the source code. There is no contractual agreement with CSF as to how to turn over the source code, maps, documentation, and training materials.

Determine the potential of introducing ChildInfo into the UNICEF's definitive software library, thus allowing it to be installed worldwide in UNICEF.

The software has the potential to being accepted into the UNICEF landscape. Some aspects of the local customisation make it difficult to support, therefore ChildInfo would require a standard installation in order to be accepted into the UNICEF environment. The usage and scope of ChildInfo needs to be agreed on in order to determine if the current version of ChildInfo is acceptable.

Study the potential of using ChildInfo as a data-gathering tool for the MDG indicators.

The data capturing and consolidation tool is not good enough to capture the MDG indicators and then share the core set of indicators with a consolidated database. ChildInfo is very strong on the presentation side of displaying indicators in the form of charts, graphs, and/or maps.

Review CSF's help desk.

The help desk is not sufficient to handle a globally distributed product. The plan of a country→region→CSF escalation process was never realised. The current web version of the ChildInfo help desk is not very good (www.child-info.org). The CSF help desk spends a lot of time performing data cleansing tasks such as data quality control, referential integrity, and upgrading databases.

Review CSF's change management and defect tracking procedures.

CSF has a formal change management and defect tracking procedure. The software firm that developed ChildInfo also programmed a system for defect tracking and change management; this process is working well within the current scope of ChildInfo. This must be reviewed once a decision on the future rollout of ChildInfo is made.

❖ **Methodology**

The framework for this evaluation is based on the ISO9126 that defines a quality model to guide one through a software evaluation process. The organisational assessment was conducted at CSF's headquarters in Ann Arbor, MI. The technical evaluation was conducted on site in New Delhi, India, where the Executive Director of CSF is stationed and where the actual software development takes place. CSF is the foundation that is capturing user requirements from UNICEF; they then contract a local Indian software development house, Logiciel, to do the actual development, digitising, presentations, and packaging.

❖ **Summary of Key Findings**

- There is no clearly defined business owner and/or project manager for ChildInfo.
- The scope of ChildInfo needs to be agreed on. For example, UNICEF needs to decide if ChildInfo will be used to capture UNICEF specific indicators resulting in the embracing of www.childinfo.org into the UNICEF Internet site.
- UNICEF/ITD needs to work with DPP to assist in developing specifications and in communicating them to CSF. A specific ITD-ChildInfo project manager should be part of the ChildInfo governance body.
- There is no unique way to identify like indicators across databases. Assuming UNICEF chooses to have more controlled indicator lists to ensure conformance across databases in order to merge databases across certain goals such as the MDGs, MTSP, or WFFC, then a change would be needed to somehow manage the corporate core set of indicators.
- The data administrator tool needs to go through a usability review in order to decide if the tool needs to be revamped in order to reduce errors and to increase data entry productivity.

- There should be a single customised version of ChildInfo that is used to capture UNICEF and/or County Team indicators.
- ChildInfo rollout needs to be managed using the same methodology as any other UNICEF software project.
- The training course should be standardised; improvements should be made to the two manuals in order to have both the overview guide and a new detailed instruction and reference manual.
- The data flow and ChildInfo installation issue needs to be defined. One needs to clearly define the boundaries of ownership, support, and training. This needs to be done along with a definition of how data gets into the standard UNICEF/UN owned databases.
- CSF does many branding or customisation exercises of ChildInfo (InfoLac, TanInfo, etc.); there must be an agreement on what this means, who pays for it, who supports it, and whether the branded or customised databases are expected to share data with the UNICEF/UN ChildInfo. An example of this is a recent \$292,800 CRC submission in India for an “Emergency Info” which has been reviewed and eventually withdrawn pending the outcome of the various ChildInfo evaluation activities.
- ESRI licensing needs to be reviewed.
- The inventory and frequency of updates to the UNICEF storage of source code, documentation, maps, manuals, etc needs be formalised. Ideally, ITD/NY should be the custodian of this library.
- The issue of ‘web enabling’ ChildInfo needs to be addressed. Again, the scope of ChildInfo needs to be agreed on, in order to decide if web enabling includes UNICEF locations, UN Country Teams, and/or local customisations which are installed in non-UN locations.
- A customised ChildInfo installation gets installed in its own set of folders on the local hard disk. This is unmanageable and needs to be fixed if we are to have a global rollout.
- The packaging of ChildInfo needs to be signed-off by UNICEF to make sure it complies with our logo and colour schemes.

❖ **Possible Roles in Moving Forward**

CSF activities

- Develop ChildInfo as per UNICEF specifications.
- Map digitising activities.
- Data cleaning on an as-needed basis; this could be part of the roll-out of ChildInfo. It could be part of the training package.
- Custom development of advocacy materials; this should be separately contracted with CSF by the country office.
- Assist in training and roll-out of ChildInfo.

UNICEF activities

- Formal delivery of product specifications to CSF for development.
- Provide the infrastructure for support. Service Desk is an option; this would have to be rolled out to the various regional support locations.
- Final quality assurance testing.
- Design the data consolidation process.

- ITD applications operations needs to manage the day-to-day operations of ChildInfo; the scope of this work depends on the outcome of the future plan for ChildInfo – for example, there may be a data consolidation component that would fall under the domain of operations.
- Schedule releases of ChildInfo within the global ITD rollout plan.
- Provide the WAN that supports data consolidation, support, and upgrade of ChildInfo.

Part 2: Evaluation Results

- ❖ This assessment covers the areas of functionality, reliability, usability, efficiency, maintainability, and portability.

❖ Components of ChildInfo

Child Info

This is the product that allows the user to create presentation galleries on the various indicators entered in the database. The product may be renamed at the local level to reflect its use. Examples of local renaming are BenInfo, ChildInfo Niger, AfricaInfo, TSED, Tanzanian HBS, NepalInfo, MenaInfo, and MEASDA. A UNICEF management decision on the localised branding of ChildInfo needs to be made; is this localisation something which UNICEF wants to fund, develop, and support?

Data Administrator module

This is the product used to insert, edit, and append data into the ChildInfo Database. It is also used to backup, restore, merge, and split ChildInfo databases.

A. Functionality

The functionality review is intended to evaluate the software in respect to the functions it was designed to perform. It covers aspects of the software that describe its suitability, accurateness, interoperability, and security.

Issues

- A clearly defined business owner and project manager needs to be identified.
- The scope of ChildInfo needs to be agreed on. For example, UNICEF needs to decide if ChildInfo will be used to capture UNICEF specific indicators resulting in the embracing of www.childinfo.org into the UNICEF Internet site.
- UNICEF/ITD needs to work with DPP to assist in developing specifications and in communicating them to CSF. A specific ITD-ChildInfo project manager should be part of ChildInfo governance body.
- Assuming that UNICEF chooses to have more controlled indicator lists to ensure conformance across databases in order to merge databases across certain goals such as the MDGs, MTSP, or WFFC, then a change would be needed to somehow manage the corporate core set of indicators.
- The issue of 'web enabling' ChildInfo needs to be addressed. Again, the scope of ChildInfo needs to be agreed on in order to decide if web enabling includes UNICEF locations, UN Country Teams, and/or local customisations which are installed in non-UN locations.

1. The development methodology of ChildInfo is based on a rapid prototyping approach. Overall requirements are gathered at Regional Steering Committee meetings. Various versions of ChildInfo are created, shared with users, with their feedback looping back into the next prototype. Additionally, the UNICEF staffs who were the main champions of this concept were located in the ROSA region within close proximity of the development team. This provided CSF the ability to have small iterative cycles with rapid feedback from some key users. This will no longer be an advantage if UNICEF intends to globalise the usage of ChildInfo.
2. The annual contracts with CSF do not specify in detail the requirements of the software. However, the contracts do outline the expected outcomes of the yearly activities; this includes extensions to the software to meet user needs. This is accomplished through the prototyping methodology used where 9 versions of ChildInfo version 3.5 were created. The product is now stable in respect to both functionality and performance; CSF does not expect much demand for additional functionality in the 3.5 version of the product.
3. The four top changes requests for ChildInfo are:
 - Enhanced on-line help desk functionality.
 - Extended mapping features.
 - Enhanced gallery organiser to include the option to categorise and file gallery presentations.
 - Ability to import DHS data directly from the DHS database; this data is of high quality and this enhancement would save much data entry time.
4. The ChildInfo steering committee needs to look at these requests and prioritise them, keeping in mind the importance of getting a data collection tool rolled out to capture the MDG indicators.
5. There are a number of feedback mechanisms in place to evaluate customer satisfaction.
 - Activity reports are filled out and signed by UNICEF staff for every CSF activity.
 - Evaluation sheets are filled in at all of the various training events.
 - The advocacy materials that get created using ChildInfo are a real life testimony to the usefulness of this product.
6. CSF considers the project to be successful when it is being used in the UNICEF country office, the UN country team, and/or directly by the government. They consider government usage to be an indicator of success – this is the ultimate end-point.

Security

7. There is no user requested security requirement. The Access database is password protected. This prevents direct manipulation via Access, all data manipulation is to be done via the Excel spreadsheet interface provided by the Data Administration tool. Additionally, ChildInfo 3.5 has encrypted .ini files that store much of the local customisation.

8. The web site www.child-info.org has a single generic user id which is used to download ChildInfo version 3.5. User support is via ChildInfo and E-mail user ID registration is used to logon.

B. Reliability

The reliability review is intended to evaluate the software in respect to maturity, fault tolerance, and recoverability.

Quality Assurance

9. Logiciel does not use any automated testing tools. They have established guidelines for testing where they do unit testing and developers test other developer code. They have formal test plans that they use to test the code against. Found defects get recorded in a change management tool and assigned to a developer (by the development team leader) prior to being fixed.
10. Defects that are discovered during the beta test stage get reported back and CSF prioritises the changes.
11. ChildInfo 3.5 is the fourth major release of ChildInfo (1.0, 2.0, 3.0, and 3.5). It is a major code redesign and rewrite, essentially making it a version 1.0 on this code base. The negative side of this is that it is a 1.0 and may carry some of the problems that a 1.0 of any product can carry with it. The positive side is that 'sloppy' code, short cuts, or hard coded aspects of programming inevitably creep into products that are developed using a rapid prototyping methodology where the prototype eventually becomes the product. ChildInfo 3.5 was CSF's opportunity to clean up the code, upgrade to VB6, and to introduce object oriented development methods.
12. So far to date, ChildInfo 3.5 seems to be stable with very few bugs being reported to the Help Desk.

C. Usability

The usability review is intended to evaluate the software in respect to understandability, learnability, and operability.

Issues

- The data administrator tool needs to go through a usability review in order to decide if the tool needs to be revamped in order to reduce errors and to increase data entry productivity.
- There should be a single customised version of ChildInfo that is used to capture UNICEF and/or County Team indicators.
- ChildInfo rollout needs to be managed using the same methodology as any other UNICEF software project.

- The training course should be standardised; improvements should be made to the two manuals in order to have both the overview guide and a new detailed instruction and reference manual.
- The question of ‘who does the data entry’ needs to be answered. If data entry gets pushed out to non-UN installations, then the issue of rollout and support becomes a risk factor.
- ChildInfo does not have a primary key that uniquely identifies an indicator; the ChildInfo identifier is the actual indicator string. This presents a challenge when merging multiple databases across different spellings and languages.
- There is a cost associated with all of the local customisations of ChildInfo; the cost of local customisation vs. standardisation needs to be reviewed.

Interoperability

13. ChildInfo does not presently interface with any other formal ‘system.’ It has tools that would allow one to exchange data. The CSF philosophy is to keep things simple for the user; this is why Microsoft Office, particularly Excel, was chosen to be the primary interface. Interfaces to other systems, such as DESA’s database, would have to be developed.
14. The ITD evaluator feels that the data administrator tool is rather ‘klunky’; CSF states that the users prefer it this way. DPP acknowledges that this was an issue in the past and that it should be reviewed within the context of the overall usage of ChildInfo.
15. The current version of the Data Administrator tool does not provide an easy way to merge many ChildInfo databases together across a predefined set of indicators. This would have to be developed if we were to use this as a way to globally consolidate the subset of indicators that are needed for the MDG reporting.
16. All of the ChildInfo databases are homogenous. They all share the same exact structures and data manipulation facilities. The customisation that is done for every installation only refers to the rollout of the product. CSF firmly believes in product ownership by the end user. Therefore each installation may be customised in respect to the packaging, user manual, help file, on-line tour, training, language, and indicators. CSF does this customisation in India.
17. Each instantiation of a ChildInfo database becomes a separate product in respect to the content. For example, CensusInfo in India would only have census related indicators. Indicators are not conformed across the various ChildInfo databases. Therefore, ChildInfo treats ‘Infant Mortality Rate’, ‘IMR’, and ‘Inf. Mort. Rt.’ as different indicators within and across databases. There is a tool that allows for the merging of many ChildInfo databases. This merge is based on an identical string comparison for the indicators.

Learnability

18. CSF conducts all ChildInfo and Data Administration training. There is no canned training package that can be mailed out. There is a training template and curriculum for all courses, but the actual material is customised or ‘regionalised’ in order to present data that the user understands. The training is a combination of Powerpoint slides followed by intensive hands-on training. By the end of the course, the user is to do a case study and to prepare and

present some advocacy materials to the rest of the class. The target audience is the M&E type of person in the office.

19. Data Administration training is conducted separately because it is usually more technical in nature.
20. CSF states that UNICEF owns the training materials.
21. Most installations contract CSF to conduct the training. Conversations with staff from TACRO indicate that there was a problem with the CSF assigned consultant for the region; he was eventually let go. The region is presently finalising a Memorandum Of Understanding with the Panamanian government. This agreement is for support and training in the region. UNICEF needs to review this because we have yet to define the boundaries for ChildInfo. This agreement is for the InfoLac project, which falls outside of the reach of the UNICEF/ITD infrastructure. This needs to be clarified by the Regional Office.

D. Efficiency

The efficiency review is intended to evaluate the software in respect to time behaviour and resource behaviour.

22. ChildInfo performs well in a stand-alone environment. Further testing would need to be conducted to evaluate ChildInfo in a client-server environment; to date, there are no locations that are running the product in this configuration. It may be possible to manually install ChildInfo in a multi-user environment; however, CSF does not support this.
23. ChildInfo has a function that would allow you to open your database via a url link. CSF stores the Access databases on a web server located in India. Performance is slow when running ChildInfo in this configuration. This is neither practical nor usable.
24. The www.child-info.org web site is outsourced to another Indian firm by Logiciel.
25. ChildInfo does not use up much more systems resources than the Microsoft products that it is based on.

E. Maintainability

The maintainability review is intended to evaluate the software in respect to analysability, changeability, stability, and testability.

Issues

- The data flow and ChildInfo installation issue needs to be defined. One needs to clearly define the boundaries of ownership, support, and training. This needs to be done along with a definition of how data gets into the standard UNICEF/UN owned databases.
- CSF does many branding or customisation exercises of ChildInfo (InfoLac, TanInfo, etc.); there must be an agreement on what this means, who pays for it, who supports it, and

whether the branded or customised databases are expected to share data with the UNICEF/UN ChildInfo. An example of this is a recent \$292,800 CRC submission in India for an “Emergency Info” which has been reviewed and eventually withdrawn pending the outcome of the various ChildInfo evaluation activities.

- ESRI licensing needs to be reviewed.
 - The cost of migrating ChildInfo to a .Net framework needs to be reviewed from the perspectives of development, rollout, and support. Supporting software on XP and non-XP systems is an issue.
 - Licensing software on non-UNICEF machines needs to be addressed. ChildInfo requires a Microsoft Office and it may require an ESRI license in the future.
 - A customised ChildInfo installation gets installed in its own set of folders on the local hard disk. This is unmanageable and needs to be fixed if we are to have a global rollout.
26. ChildInfo is based on Visual Basic 6. This presents CSF with some difficulty in implementing multi-language support. They would prefer to develop and deploy on Visual Studio .Net and XP, thus allowing them to make better use of new features in those two products.

Roll-out

27. Since ChildInfo is not mandatory for all offices to use, it is installed on a per request basis. There is a rollout plan defined during the ChildInfo Steering Committee meetings, however, the local UNICEF office quite frequently changes this plan.
28. Roll-out plans in relation to new releases of the software follow a beta test, feedback, fixing loop. The number of ChildInfo installations is relatively small, thus allowing a more informal rollout. This would need to be more rigid in order to distribute ChildInfo to all countries.
29. The upgrade from ChildInfo 2.0 to 3.5 could have been carried out at the actual ChildInfo location, however, most locations requested CSF to do the upgrade in India.

Compliance

30. ChildInfo mostly uses Microsoft development tools and products. The code is written in Visual Basic and extensively uses Microsoft Office products such as Word, Excel, and Access. The maps are rendered using ESRI’s royalty free runtime viewer, ArcView version 1.2. As of this year ESRI no longer supports this version. The newer version, 2.0 Lite, has some reduced functionality, especially in the area of label rendering on the maps; therefore CSF chose to keep the 1.2 version embedded into ChildInfo.
31. ChildInfo is designed to use Access 2000 as a repository. However, the UNICEF standard of Office 97 is compatible with ChildInfo. One cannot open the database using Access 97 - it

can only be accessed via ChildInfo. To date, this has not been a problem in any of the ChildInfo installations.

Support

32. According to CSF, the M&E focal point in the country office supposedly “owns” the CI implementation, runs it, and supports it. The design is for this person to get the first level help desk call. The escalation should go up to the Regional Office and then only to CSF. It is not clear that M&E ownership is consistent in all installations.
33. The UNICEF staff in the IT office is not designed to be part of this support flow; this is not always the case.
34. The goal is to have the Regional capacity institutionalised with a person recognised and dedicated to ChildInfo activities.
35. According to CSF, Tanzania hired an outside company, SOFTTECH, to support ChildInfo. UNDP would have to be contacted for more information, since they manage all ChildInfo activities as related to TanInfo
36. There is a link in the **Help** menu that points to a customised web site. For example, www.taninfo.org or www.beninfo.org. These links do not work in any installation. The plan has been that the government would set up their own site using whatever url they want. They were to establish a local helpdesk and to set up the site to make databases available from their site. So far, this has not been implemented. Apparently TSED (TANZANIA SOCIO-ECONOMIC DATABASE) is interested. The idea was to have a customised web site, run by the Government, to provide the support.

F. Portability

The portability review is intended to evaluate the software in respect to adaptability, installability, conformance, and replaceability.

Issues

- The inventory and frequency of updates to the UNICEF storage of source code, documentation, maps, manuals, etc needs be formalised. CSF feels that ITD/NY should be the custodian of this library.
- If UNICEF truly owns the maps, then we should be able to publish a ‘map library’ that can be used in other projects.
- If the data administration tool is to remain single user, then it needs some checks built in which prevent simultaneous data manipulation.
- If ChildInfo is to become web enabled, then the issue of web enabling the Data Administration tool needs to be discussed.

37. CSF informed us that the source code, boundary files, documentation, etc is supposedly kept in a safe in the ROSA Regional Office. There is no formal written procedure by UNICEF which documents how and when something gets sent to the Regional Office.

Multi-user Capability

38. Both CSF and Logiciel say that ChildInfo can run in a LAN environment. There was a separate installation program for the 2.0 LAN version which has both client and server components. If the requirement of ChildInfo is to have it run in a LAN environment, then this would need further investigation and hands-on testing. ChildInfo version 2.0 had this functionality; however, ChildInfo 3.5 did not release this functionality since there was no UNICEF decision to proceed with the LAN version.
39. The Data Administration tool is not a multi-user product. Only one person at a time can perform data management activities in ChildInfo. This is acceptable functionality to the users, however, the software is not built to enforce this and the effect of simultaneous data administration or data administration concurrently with ChildInfo use is unknown. This would need to be tested, changed, or simply documented.
40. Likewise, the simultaneous use of the ChildInfo database needs to be tested in a lab environment.

Data Consolidation

41. The Data Administration tool has a function to merge databases. One chooses the databases to merge and the tool finds the like indicators (based on string comparisons) in the databases and proceeds to create a merged Access database. This is an intersection merge – only ‘like’ indicators get merged.
42. It seems as if the spreadsheet export utility can be used to do a union merge; this would have to be tested in a lab environment.
43. A version control issue exists if merging or exporting government or non-UN databases into UNICEF or UN Country Team ChildInfo databases. It will be very difficult to keep non-UN installations up to date in order to guarantee compatibility between databases. This refers to the earlier point on defining the boundaries and usage of ChildInfo.
44. Microsoft Access database can grow to be a maximum of 2 GB; therefore, this platform cannot be used to consolidate many ChildInfo databases.