



# United Nations Industrial Development Organization

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## General Conference

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Item 14 of the provisional agenda

### Programme and budgets, 2010-2011

## Unutilized balances of appropriations

### Report by the Director-General

In compliance with decision IDB.36/Dec.12, paragraph (e) (ii), presents Member States with the feasibility study which considers the expected impact of the change management initiative.

#### The need for a comprehensive change management approach

1. After a decade of wide-ranging programmatic and administrative reforms, implemented in the context of tight budgetary constraints, UNIDO has come to be recognized as a highly relevant and efficient provider of key development services in its mandated areas of poverty reduction through productive activities, trade capacity-building, and environment and energy. The demand for the Organization's services has witnessed a rapid growth in recent years, and the volume of funds available for future delivery will reach a record of more than \$330 million by December 2009. Based on this continuing expansion of available resources, and on the ongoing formulation of new technical cooperation programmes and projects, UNIDO appears well placed to increase the delivery of its technical cooperation services from an anticipated \$125 million in 2009 to \$250 million within a period of four to six years within its well-defined thematic priorities.

2. These favourable prospects for the growth of demand for UNIDO services need to be balanced, however, against changes in the modalities with which major donors, such as Global Environment Facility (GEF), the Montreal Protocol, the

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European Commission and multi-donor trust funds cooperate with organizations of the United Nations system. They are increasingly introducing complex and demanding new requirements for such cooperation arrangements, based on assessments of the internal processes of their partner organizations. Thus, GEF has introduced a set of wide-ranging fiduciary standards with which its partner organizations must comply, while the European Commission is conducting a so-called “four pillar” exercise with its partners to ensure common standards for accounting, audit, internal control and procurement processes. These requirements are imposing considerable demands on the partner organizations, including UNIDO, for adjustments to all of their operational processes and supporting information technology (IT) systems.

3. In addition, UNIDO is facing the need to integrate the results-based management (RBM) approach in all of its systems, following the recent recommendation by Member States to the General Conference, in decision IDB.35/Dec.5, of the medium-term programme framework (MTPF) for 2010-2013, which has been formulated on RBM principles. Similarly, UNIDO has progressively strengthened the application of the results-based budgeting approach in its programmes and budgets over the recent bienniums. To fully embed the principle of budgeting and managing for results in UNIDO’s operational and programmatic activities, however, additional systems support is needed to obtain the results-related information required to inform a results-based decision-making process.

4. The increasing efforts of UNIDO to respond more effectively to the requirements of its Member States by enhancing its field presence, and decentralizing its operations to the field, is placing additional pressure on the Organization to upgrade its support systems. For the effective and efficient provision of such decentralized services, UNIDO requires a robust and flexible IT infrastructure with outreach to its field offices worldwide, providing them with the connectivity required to ensure their full integration into the various operational processes of the Organization.

5. Finally, UNIDO is increasingly being called upon to contribute to the efforts throughout the United Nations system to achieve a system-wide harmonization of business practices, which are a precondition for the effective implementation of the inter-agency coherence at the country level, as demanded by the United Nations “Delivering as One” (DaO) approach. The pressures to achieve such a harmonization of business practices, which are already posing a considerable challenge for UNIDO, appear likely to intensify in the coming years, all the more so, as about 90 countries roll out their United Nations Development Assistance Framework (UNDAF) and DaO self-starter programmes. To be able to participate effectively in the implementation of these programmes, UNIDO will have to review and adjust its business practices and processes through a comprehensive business process re-engineering, and put in place the supporting IT infrastructure, with a view to achieving the required system-wide harmonization.

6. In summary, UNIDO faces five significant challenges that require it to make extensive changes to its businesses processes and systems if it is to maintain the effectiveness of its contribution to supporting the aspirations of its Member States to achieve the Millennium Development Goals:

- 
- (a) The need to implement a fast-growing portfolio of funded and fundable projects based on country demand;
  - (b) The need to comply with strict donor requirements, such as the GEF fiduciary standards and the "four pillars" required by the European Union;
  - (c) The need to have systems in place allowing the monitoring of results, and resources spent on achieving those results (results-based management and budgeting);
  - (d) The need for better connectivity and linkages between Headquarters and field offices to allow real-time transmission of, and access to, relevant information flows; and
  - (e) The need to contribute effectively to the ongoing process of harmonization of business practices as part of the United Nations system-wide coherence agenda.

### **Investment in change management**

7. Recognizing both the urgency of the investment in a comprehensive change management initiative required to meet the challenges outlined above, and the anticipated persistence of budgetary constraints on the Organization, the Director-General has submitted a proposal to Member States outlining an approach that might be adopted to finance the required investment. This proposal, originally submitted to the twenty-fifth session of the Programme and Budget Committee in document IDB.36/12-PBC.25/12 and elaborated further at the thirty-sixth session of the Board in document IDB.36/12/Add.1, recommends to Member States to agree to the retention by the Secretariat of the unutilized balances of appropriations due for distribution in 2010. It further provides for these resources to be used for two important initiatives: firstly to finance the endowment of two trust funds to mobilize additional resources for technical cooperation programmes in the priority areas of increased food security through agribusiness and agro-industry promotion, and renewable energy for productive activities; and secondly to finance the implementation of a comprehensive change management initiative, including the introduction of a fully integrated organization-wide enterprise resource planning (ERP) system.

8. Following initial consideration of this proposal, the Board requested the Director-General, in decision IDB.36/Dec.12, to conduct a feasibility study to consider the expected impact of the change management initiative on the overall cost efficiency of UNIDO. In compliance with this decision, the Secretariat, following due process, engaged the services of an internationally renowned business consultancy, Deloitte Consulting, to conduct an independent feasibility study of the comprehensive change management initiative proposed by the Secretariat. The findings and conclusions of this feasibility study were presented to the Member States in a briefing given by the consultants on 13 October 2009, which generated a fruitful debate and many valuable comments and suggestions from Member States. These have been integrated into the final feasibility report prepared by the consultants, which is attached to the present document.



# Feasibility Study of a Comprehensive Change Management (CM) Initiative at United Nations Industrial Development Organization (UNIDO)

Vienna, 21 October 2009

## **Feasibility Study of a Comprehensive Change Management (CM) Initiative at United Nations Industrial Development Organization (UNIDO)**

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## 1. Executive Summary

1. The present document relates to the main findings and recommendations of the feasibility study for the Change Management Initiative at UNIDO, which was carried out by Deloitte Consulting.

### Objectives

2. Based on internal assessments, the Organization identified the following areas to be included in the CM initiative:

- An enhanced integration of UNIDO's various management systems and practices, including four functional areas: Technical Cooperation – Project Management; Human Resource Management, including payroll; Procurement and Financial Services;
- An improved utilization of UNIDO's organizational capacities both at Headquarters and field levels to achieve higher throughput;
- An updating and upgrading of UNIDO's IT infrastructure to meet these needs.

3. Changes implied have to take into account, among others, the following:

- Best practices;
- Benchmarks with comparable public or private organizations;
- The international character of UNIDO.

### Method/Approach

4. An external consulting company (Deloitte Consulting) was duly selected and commissioned to fulfil the above objective in the period of 31 August to 5 December 2009 to provide a feasibility study (PHASE I) before 15 October 2009 and to provide an Implementation Roadmap (PHASE II) prior to the General Conference taking place between 7 and 11 December 2009.

5. The work in September 2009 was performed with the substantive support of the UNIDO Secretariat in the following four functional areas: Technical Cooperation – Project Management; Human Resource Management, including payroll; Procurement and Financial Services. Furthermore, external auditors, internal auditors, the Staff Council as well as selected representatives from the field offices and regional offices were consulted and interviewed throughout the project.

6. After the presentation to UNIDO's Member States during October 2009, the additional comments and issues raised during the informal consultation have been taken into account in the report.

7. To support UNIDO's envisioned change, four generic scenarios were considered, covering the whole gamut from purely reactive change to changing environment and outside pressures up to a proactive rebuilding of the complete spectrum of systems, processes and practices, including a restructuring of ICT tools and business processes.

8. These potential scenarios were used as a backdrop for Deloitte's analysis supported by personal interviews, functionally standardized questionnaires, review

of documents and processes and a set of workshops to ascertain both the current situation and possible change levers that are described in the report as solutions. The documentation of the findings and potential solutions to the scenarios were clustered in the following four categories:

- Improve Process Productivity;
- Enhance Delivery Capacity;
- Increase Efficiency of ICT Tools; and
- Strengthen Accountability.

9. The resulting solutions were then applied in the four different implementation scenarios according to their relevance. These scenarios are primarily differentiated along the change impact but were also detailed according to the implementation time frame as well as the overall costs and potential support of UNIDO's goal of doubling its service delivery capacity.

10. The prioritized solutions were then assessed on how far they are supporting the integration of UNIDO in the ongoing UN system-wide coherence process, specifically the harmonization of business practices. Especially in the third and fourth scenario it appeared feasible to enable a system-wide exchange of information by envisioning multidimensional reporting as part of the future system. In the selection of modules of the future system in the third and fourth scenario, the system-wide coherence has to be part of the evaluation criteria.

11. All above dimensions of change (e.g., to improve process productivity, to enhance delivery capacity, to increase efficiency of ICT tools, to introduce reporting based on RBM principles, and to strengthen accountability) have the goal of increasing the efficiency/productivity of the organization as a whole.

12. In Deloitte's experience with similar organizations, potential system replacement efficiency/effectiveness gains of up to 30 per cent are possible when Business Process Reengineering (BPR) is performed before systems are replaced and the efficiency/effectiveness criteria are part of the evaluation for the selection process for the future system. In Deloitte's view, this up to 30 per cent gain would allow channelling of the capacities absorbed by current labour and paper based processes into the technical cooperation activities. The automation would also allow a better integration of field offices into the core operations of the Organization. Such efficiency/effectiveness gains, together with all other direct benefits from increased integrated system support, should allow UNIDO to achieve a quantum leap in its capacity to deliver TC services to its Member States.

### **Conclusion**

13. All analysed change scenarios in the context of UNIDO imply investments along different timelines and at different total cost. Each scenario yields different gains to enable UNIDO to fulfil its goals for significantly increasing its delivery capacity, meet increasing demands, improve transparency, support the system-wide harmonization process and provide for effective monitoring of operations based on RBM principles as well as improved utilization of the organization's capacities both at Headquarters and field levels. Taking into account UNIDO's current situation, the analysis showed that a one-time investment in a BPR exercise as a starting point for

an Enterprise Resource Planning (ERP) system implementation is essential for UNIDO to achieve these objectives.

14. The four different change scenarios are compared in the figure below showing their main dimensions depicted in separate lines. Specifically, the approximate external costs, the estimated time for conclusion and the estimated additional internal costs are compared.

Figure I

Scenarios	I Status Quo	II Incremental Improvement	III Holistic Change	IV Fundamental Rebuilding
Total external costs	*)	10 M€	9 M€	20 M€
Estimated timeline		8 years	3 years	5 years
Additional Internal Costs	none	High	medium	very high

\*) “Scenario I” does not have a timeline or a cost estimate due to it being purely reactive and therefore ad-hoc need for investment e.g. when there is a system breakdown.

15. All four scenarios were duly analysed and evaluated taking into account UNIDO’s current situation, systems, processes and needs. Having considered their respective advantages and disadvantages, the following recommendations are made:

**Scenario I: NOT RECOMMENDED** – seriously endangering UNIDO operations and services to Member States;

**Scenario II: NOT RECOMMENDED** – will not allow timely achievement of required capacity and compliance with external requirements;

**Scenario III: RECOMMENDED** – cost effective scenario to achieve required capacity and compliance with external requirements, integrating new processes and systems while keeping the current finance system;

**Scenario IV: RECOMMENDED** – most technically viable and comprehensive solution that allows custom adaptation of chosen new system to exactly match UNIDO’s circumstances and requirements in one integrated ERP package, including a finance system, albeit at higher costs and in a longer time frame.

## 2. Objectives of the CM Feasibility Study

### UNIDO’s Change Management (CM) Initiative

16. Over the past decades, the pace and pattern of change in the global economy have created an increasingly complex environment for industrial development. The internationalization of industrial production, trade, investment and technology is moving at an unprecedented but uneven pace, creating a growing industrial divide and widening disparities between developed and developing countries, and among

developing countries themselves. Despite considerable efforts to meet the MDGs, poverty remains prevalent in many parts of the world. Together with current food, fuel and financial crises these challenges need to be addressed if continued progress is to be made towards meeting the goals and targets both of UNIDO and the Millennium Declaration.

17. Due to such developments, UNIDO's mandate has assumed an enhanced role in the global development agenda in recent years. The Organization is recognized as a highly relevant, specialized and efficient provider of key development services in support of the interlinked challenges of reducing poverty through productive activities, promoting the integration of developing countries in global trade, fostering environmental sustainability in industry, and improving access to energy for development. As a consequence, the demand for UNIDO services has increased rapidly raising the volume of funds available for future delivery to a new record.

18. In addition, both governmental donors and dedicated funds are introducing new requirements, which are more demanding and complex with regard to the way in which projects funded by them have to be implemented. Further, UNIDO aims at increased harmonization of its management systems with those employed by other agencies of the United Nations system, with a view to ensuring a high level of inter-agency coherence within the framework of the UN system-wide harmonization initiatives.

19. However, UNIDO's ability to meet the growing demands of its Member States, donors and recipients with its constrained capacities and zero-growth regular budget is coming under increasing pressure. Important changes in UNIDO's management processes and systems are therefore becoming necessary to enable the Organization to meet these demands.

20. UNIDO recognized the need for change and several initiatives have already been launched throughout the Organization. However, since these initiatives were triggered by a mixture of external and internal events, they were developing independently from each other, without their inter-linkages and inter-dependencies sufficiently recognized and addressed. Moreover, even collectively, these initiatives are insufficient to fundamentally modify UNIDO's business model so as to enable it to meet the increasing demands, improve transparency, provide for effective monitoring of operations and allow for better early warning and decision-making, as well as proactively addressing risks.

21. Thus, in order to be able to meet the challenge posed by an accelerating growth in demand for its services on the one hand, and the constraints on its ability to increase human and core financial resources on the other, UNIDO must intensify its efforts to enhance operational efficiencies. This will require a full review and redefinition of its business processes, with a view to increasing the productivity of the Organization as a whole, and of all of its constituent parts. Such investments, in a relatively short time, are expected to boost the efficiency and productivity of UNIDO so that it will be enabled to meet the increasing demands for its services. Initial steps have already been taken in this direction with the Organization having performed an internal analysis of its current status and future needs.

22. Based on these internal assessments, the Organization has identified the following three specific issues:

- An enhanced integration of UNIDO's various management systems and practices, including four functional areas: Technical Cooperation – Project Management; Human Resource Management, including payroll; Procurement and Financial Services;
- An improved utilization of UNIDO's organizational capacities both at Headquarters and field levels to achieve higher throughput;
- An updating and upgrading of UNIDO's IT infrastructure to meet these needs.

23. In order to address the above issues, the Organization has already initiated work on a Change Management initiative including a pilot Business Process Reengineering exercise and exploring the introduction of an Enterprise Resource Planning system through consultation with other United Nations organizations.

#### **Mandate for the Feasibility Study**

24. In April and June 2009, the PBC and the IDB reviewed the Secretariat's proposal for a comprehensive Change Management Initiative to be carried out in the time frame of 2009 to 2011.

25. In June, the IDB requested the Director-General to carry out a feasibility study which considers the expected impact of the Change Management initiative on the overall cost efficiency of the Organization, with particular emphasis on the various cost elements involved in the implementation of an ERP system for the Organization (ref: IDB.36/Dec.12).

### **3. Overview Method/Approach**

26. For the feasibility study of a comprehensive Change Management Initiative at UNIDO, Deloitte adapted its transformation approach for the analysis/optimization of business processes and organizational structures to fit UNIDO's needs. The methodology utilizes a broad spectrum of rating tools, best practice processes and structures as well as a large number of templates for an efficient execution of the project.

27. In the last years, Deloitte has already worked on several projects within the UN System, for example on a needs assessment and development of systems requirements in the area of budget information systems. Additionally to similar functional work in process/organizational analysis Deloitte's project team members assisted several other public sector clients in quality assurance and project management functions on Change Management challenges similar to UNIDO. During the feasibility study, the project team drew on this rich experience as well as on the experience of UNIDO's staff when formulating solutions to enable the envisioned change.

### **Change Management and Business Process Reengineering**

#### **Change Management**

28. Change Management can be seen as a series of activities that cause a desired improvement or enhancement to an existing system or organization. Successful

Change Management creates an organization that “moves as one”, recognizes trends in complexity and induces a flexible institution in an uncertain environment while at the same time balancing continuity with change. Consequently, a change at the organizational level is always intended to make the organization faster, coherent, more efficient, effective, transparent and sustainable. The Change Management approach focuses on the adoption of new technologies, major strategic shifts, on process reengineering, restructuring and cultural changes, including people’s behavioural changes.

29. Once new behaviours and customs within an organization are established, they need to be backed up by updated and new business processes. Thus, Business Process Reengineering is essential for an organization to undergo a successful change process.

### **Business Process Reengineering**

30. Business Process Reengineering is a focused activity, in which an operational entity reviews and analyses its business processes from start to end, considering all involved functional areas. The table below describes the typical steps during a BPR exercise:

Table I

<b>Common approach to Business Process Reengineering</b>	
Development of the business vision	BPR is driven by a business vision which implies specific business objectives such as time reduction or increasing productivity.
Identification of processes to be redesigned	The focus lies on those processes that conflict most with the business vision.
Understanding and assessing existing processes	These activities provide a baseline for future improvements.
Identification of IT levers	The awareness of IT capabilities is influencing process design.
Designing new process	The design should not be viewed as the last step of the BPR exercise but as a prototype.

31. A BPR exercise starts with the definition of the business vision and the objectives. After all processes that need to be revised are identified and new business processes are designed, an action plan, based on the gap between the existing processes, technologies and structures and the desired state, is created. Such an action plan involves all functional areas and includes an implementation roadmap fitting the agreed vision and objectives.

### **Possible Change Scenarios**

32. In order to change UNIDO’s current situation to its future vision, four scenarios are possible, ranging from “No Change” all the way to “Fundamental Change” by comprehensive organizational rebuilding.

33. The dimension of achievable change was used to classify the possible paths for action in four scenarios, grouped in (a) reactive change depending on outside demands and (b) proactive change from within the organization:

**(a) Reactive Change Scenarios**

**I. Status Quo**

Maintain current processes and systems. The change process is reactive to pressure or growing demands, but not necessarily from within the organization. Little to no long-term change can be achieved with this scenario.

**II. Incremental Improvements**

Invest sequentially in processes and separate systems over a longer time frame, following an evolutionary path based on situations and circumstances. Change is incremental and mainly subject to availability of funds, people and reaction to pressure, not necessarily with a clear vision for the whole picture of change.

**(b) Proactive Change Scenarios**

**III. Holistic Change**

To achieve the change vision, invest simultaneously in processes and integrated systems with an implementation roadmap. The vision is built around essential components of the current systems, utilizing existing knowledge and motivation from within the organization. This is supplemented by a mandate to change as quickly as possible.

**IV. Fundamental Rebuilding**

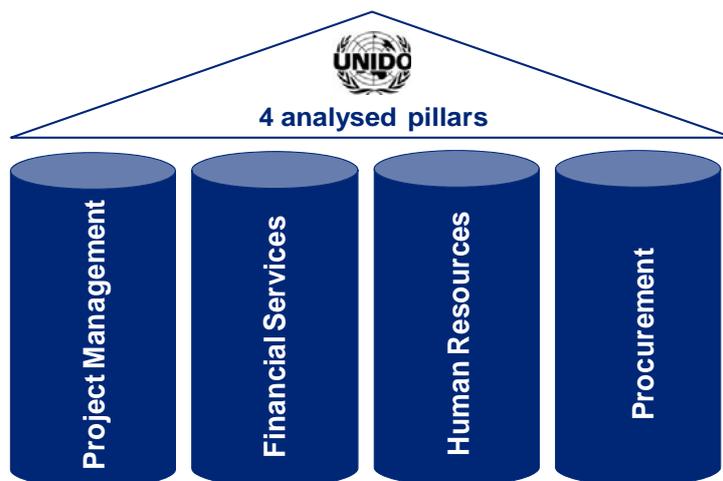
Replace all existing systems and related processes by a new and fully integrated ERP system, based on a commercial vendor and around a single platform and align the organization's business processes. The solution is based on the selected system's capacity, largely depending on the match between current and expected requirements and the selected ERP package and processes.

**Approach Applied to UNIDO**

34. Taking into consideration the dimensions of possible change in the above scenarios, Deloitte evaluated the current situation of UNIDO's organization, systems and processes.

35. As the focus of the feasibility study is on UNIDO's four functional areas (TC-Project Management; Financial Services; Human Resource Management, including payroll and Procurement), Deloitte decided to divide the analysis according to the four illustrated pillars:

Figure II



36. The analysis followed different methodologies adapted to the specific needs and requirements of the four functional areas and their current situation.

37. In parallel, the evaluation and analysis of the four established scenarios (from reactive all the way to proactive) were expanded based on the identified potential improvements, the interpretation of qualitative and quantitative data input and the comparison of UNIDO's current state to best practice and benchmarks with comparable organizations.

38. The four scenarios cover a range from minimal to fundamental changes for UNIDO, taking relevant requirements into account. An analysis of possible efficiency/effectiveness gains resulting from the implementation of the recommended scenarios was conducted and potential future challenges and risks during the implementation phase were discussed.

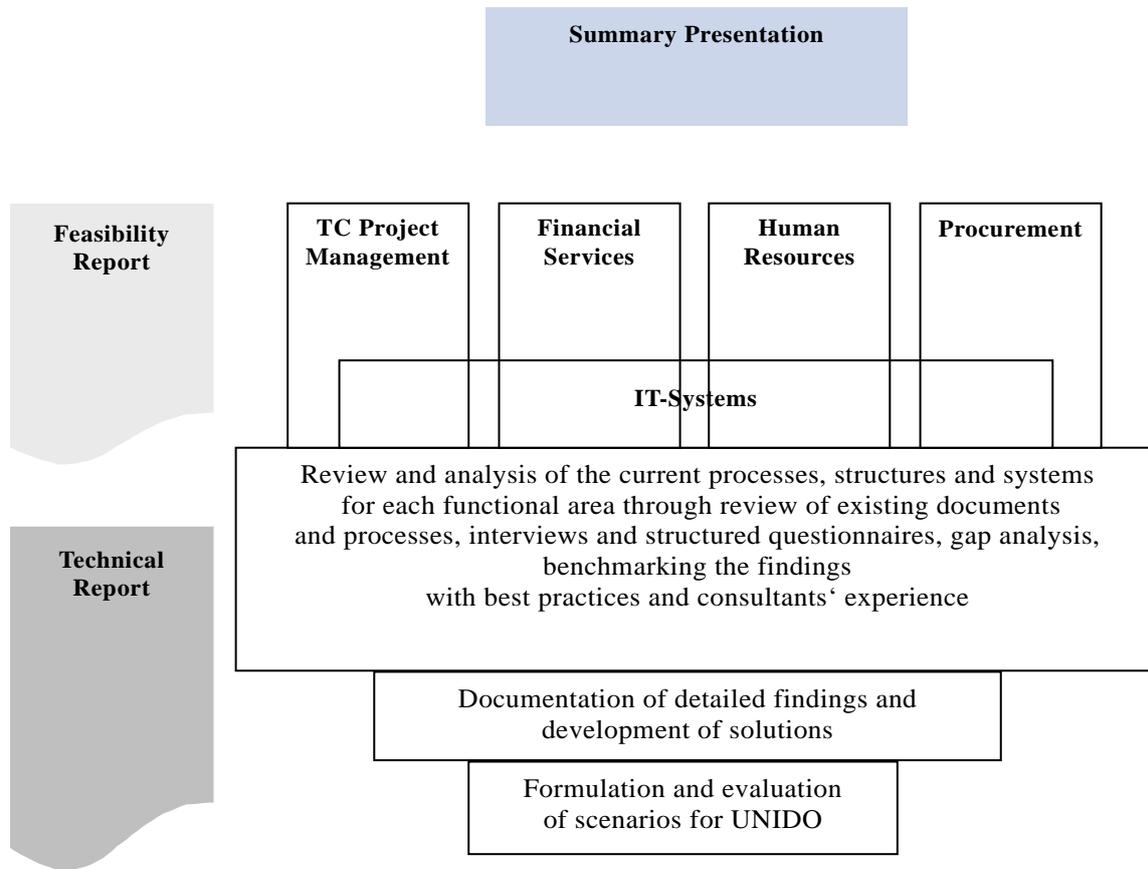
39. Furthermore, process documentations, guidelines and manuals were reviewed and numerous structured in-depth interviews were conducted with key staff in order to answer emerging questions and find possible solutions. Additionally, questionnaires were used in selected areas for discovering gaps and targeting emerging topics for detailed analysis.

40. The results of PHASE I of the feasibility study are being:

- (a) Condensed into a summary presentation to UNIDO management and Member States (which took place on 13 October 2009),
- (b) Described in this Feasibility Report, and
- (c) Expanded in detail in a subsequent technical report to the Secretariat.

41. In addition to the findings presented by the Feasibility Report, the Technical Report will contain a detailed description of the methods used, all findings and potential solutions and an evaluation of the questionnaires. Detailed findings and potential solutions for each functional area will also be presented. The following diagram provides an overview of the approach applied at UNIDO:

Figure III



#### 4. Summary of Current Situation

42. Over the years, UNIDO has taken measures to incrementally enhance both procedural and operational aspects of UNIDO’s work in line with requirements and best practices of the UN system. There has been a continuous effort on simplifying business processes, procedures and organizational structures, as well as gradually upgrading the IT structure to cope with growing workloads and increasing demands placed on the Organization.

43. UNIDO’s efforts to innovate and address urgent needs led to numerous isolated improvements in the four functional areas (TC-Project Management, Procurement, Human Resources and Financial Service), as well as in the support systems. For instance, in 2001/2002 the introduction of the Euro as UNIDO’s base currency for budget, accounting and reporting and US dollars as a secondary reporting currency necessitated the change to a new Financial Performance Control System (FPCS) based on a commercial software package. Since its introduction, numerous upgrades of the FPCS have been implemented to ensure proper functionality and vendor support for the system.

44. Some other notable incremental improvements over the last several years relating to business processes, operational structure and system support were: focusing of TC activities under three thematic areas (Poverty Reduction through Productive Activities, Trade Capacity Building, and Energy and Environment); preparation of comprehensive guidelines to document the management processes of the TC cycle and clarify role, responsibility and accountability of various stakeholders; adoption of RBM framework for the regular budget and TC projects; paper-free reporting through implementation of InfoBase for data warehousing and reporting; rolling out of various data input functions to the source (for instance, obligations, project allotment document (PADs), funds checking); better IT support for some administrative processes such as, recruitment (partially achieved), travel authorization, procurement planning, asset management; introduction of IPSAS. Further details of major incremental improvements carried out since 2001 are shown below.

45. Over these years, UNIDO has also been actively looking at various IT systems/solutions (both commercial and within the UN system) to replace the legacy mainframe system established between the late 1980s and mid 1990's that is mainly being used for human resources management and payroll, as well as to identify suitable systems for other areas, such as TC project management, procurement, institutionalization of RBM, as well as the supporting tools needed to achieve further decentralization, empowerment of staff and strengthening accountability. Nevertheless, being aware of the fact that many of the pressing issues need to be addressed in an integrated and coherent manner and facing strict constraints in financial resources, the Organization could not realize all its innovative ideas.

46. As seen below, UNIDO has made considerable efforts to implement measures aimed at improving productivity, enhancing delivery capacity and increasing efficiency of ICT tools within the available budgetary resources. However, further significant improvements cannot be achieved with the same incremental and isolated approach.

Table II  
Major Incremental Improvements since 2001

	<b>TC-Project Management</b>	<b>Financial Services</b>	<b>Human Resources</b>	<b>Procurement</b>
<b>Business Processes</b>	<ul style="list-style-type: none"> <li>• Focusing TC on three thematic areas</li> <li>• TC guidelines and procedures</li> <li>• Introduction of Euro based project accounting</li> <li>• Improved (paper free) master file/PAD authorization</li> <li>• Improved donor account information</li> </ul>	<ul style="list-style-type: none"> <li>• Adoption of Euro as base currency</li> <li>• Roll-out of Obligations and PAD revisions to substantive branches</li> <li>• Introduction of Field Office Imprest Accounts</li> </ul>	<ul style="list-style-type: none"> <li>• Streamlining of Consultant recruitment processes</li> <li>• Unification of Staff Index numbers data capture</li> </ul>	<ul style="list-style-type: none"> <li>• New Procurement manual</li> <li>• Roll-out of requisitions</li> <li>• Open solicitation process</li> <li>• Documentation of procurement workflows</li> </ul>

	<b>TC-Project Management</b>	<b>Financial Services</b>	<b>Human Resources</b>	<b>Procurement</b>
<b>Operational Structure</b>	<ul style="list-style-type: none"> <li>• Adoption of RBM framework</li> <li>• TC Compact for staff appraisals</li> <li>• Establishment of the Quality Advisory Group and Public Advocacy and Communications Unit</li> </ul>	<ul style="list-style-type: none"> <li>• IPSAS</li> <li>• Revision/Simplification of financial rules and regulations</li> <li>• Project/Administrative Assistant Training</li> </ul>	<ul style="list-style-type: none"> <li>• Human Resource Management Framework</li> <li>• Introduction of Field Office mobility policy</li> <li>• Operational Manual for field offices</li> </ul>	<ul style="list-style-type: none"> <li>• Limited decentralization of procurement process</li> <li>• Mandatory procurement test and training</li> <li>• Procurement Help Desk</li> <li>• Electronic library</li> </ul>
<b>Systems Support</b>	<ul style="list-style-type: none"> <li>• Paper-free reporting through implementation of InfoBase for TC data</li> <li>• Online reporting and funds checking for regular budget and TC projects</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of Financial Performance Control System including upgrades</li> <li>• Electronic processing of UNDP Inter Organizational payments</li> </ul>	<ul style="list-style-type: none"> <li>• Migration of recruitment and evaluation system to a web-based platform (online job database and vacancy system)</li> <li>• Travel authorization system</li> <li>• Time recording and leave planning system</li> <li>• Personnel reporting system</li> <li>• Staffing table</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of Fixed Asset/Inventory system</li> <li>• Introduction of procurement planning system</li> </ul>

## 5. Cross-functional Findings and Solutions

47. Deloitte's findings together with possible solutions to determine the feasibility of change are based on the above described methodology.

48. The most promising findings and solutions enabling the vision and goals of the Change Management Initiative, i.e. significantly increasing the delivery capacity, meeting increasing demands, improving transparency, supporting the UN system-wide coherence process, improving the utilization of the organization's capacities both at Headquarters and field levels, introducing reporting based on RBM principles, etc., were chosen for further investigation and are summarized in this report.

49. The selected findings/solutions were grouped along several dimensions as follows:

- Improve Process Productivity;
- Increase Delivery Capacity;
- Increase Efficiency of ICT Tools;
- Strengthen Accountability;
- Increase Effectiveness.

50. The dimensions of “Strengthen Accountability” and “Increase Effectiveness” by Results Based Management were deemed essential for arriving at a comprehensive solution irrespective of the analysed functional area. Thus, these two dimensions were analysed towards solutions across all functional areas.

### Structured Main Findings

51. The table below summarizes Deloitte’s main findings per functional area. Each of the three dimensions in the first column: Business Processes, Operational Structure and System Support, covers findings for the four functional areas in the first row, i.e., Project Management, Financial Services, Human Resources and Procurement.

Table III

	<b>TC – Project Management</b>	<b>Financial Services</b>	<b>Human Resources</b>	<b>Procurement</b>
<b>Business Processes</b>	Similar processes for projects of all types and sizes	Complex budget structure	Long approval cycle for hiring experts	Complex process requirements for items between €20,000 and €70,000
<b>Operational Structure</b>	High dependency on individual project managers in each stage of project	Lack of timely availability/processing data from field offices	Non-utilization of centralized roster for selection of experts	Future need for most goods and services are not available for planning
<b>System Support</b>	Insufficient tools and lack of electronic data/system for project management	Management and donor reports mainly created manually	Diverse, non-integrated HR-IT landscape based on mainframe technology	Current IT-modules do not support full procurement cycle

For example, the finding for the dimension “Business Processes” in the functional area “TC-Project Management” is that “Similar processes for projects of all types and size” exist.

52. The above table serves as an index for the more detailed descriptions of findings and their associated solutions described later in this chapter.

### Structured Main Solutions

53. The following table presents the solutions according to the findings presented before. The dimensions in the first column of the table comprise: Improve Process Productivity, Enhance Delivery Capacity, Increase efficiency of ICT tools, Strengthen Accountability and Increase Effectiveness. For the first three dimensions, the structure of findings was adapted to point to the potential gains in the original dimension, i.e. a solution for the four functional areas (e.g., TC-Project Management, Financial Services, Human Resources and Procurement) is described.

54. All proposed solutions are focusing on results allowing an RBM-Approach and knowledge sharing to increase the productivity of the organization and enable UNIDO to meet the challenges stipulated in previous chapters.

Table IV

	(i) <b>TC – Project Management</b>	(ii) <b>Financial Services</b>	(iii) <b>Human Resources</b>	(iv) <b>Procurement</b>
<b>(a) Improve Process Productivity</b>	Differentiate and streamline process flows according to project categories	Simplify budget structure for Regular Budget and projects	Simplify approval structure to accelerate process cycles	Rationalize process requirements up to €70,000
<b>(b) Enhance Delivery Capacity</b>	Structure project teams to support different types of projects with adequate authority	Improve input capacity for financial data and delegate tasks	Enable managers to recruit project personnel and consultants from a HR roster	Enable strategic procurement e.g. through framework contracts
<b>(c) Increase Efficiency of ICT Tools</b>	Assess/implement adequate system for milestone and results-based project management and monitoring	Automate external and management reporting	Replace Mainframe with integrated HR-IT-system	Enable IT-Support in processing to eliminate paper flow
<b>Strengthen Accountability</b>	<ul style="list-style-type: none"> <li>- Implement and enforce use of electronic workflow including archiving</li> <li>- Develop a framework to improve control and risk management</li> </ul>			
<b>Increase effectiveness</b> through implementation of planning, knowledge sharing, monitoring and evaluation systems, all focusing on results (RBM-Approach)				

As an example, the solution for the dimension “Improve Process Productivity” and the functional area “Financial Services” is to “Simplify budget structure for Regular Budget and projects”.

In the dimension of “Strengthen Accountability”, the solutions “Implement and enforce use of electronic workflow including archiving” and “Develop a framework to improve control and risk management” were analysed and applied to all four functional areas across the organization.

55. The above table serves as an index for the detailed description of findings and their solutions presented in the following chapter.

### **Improve Process Productivity**

56. When applying Deloitte methodologies and integrating project experience of comparable undertakings in similar organizations, the functional teams initially assessed the maturity of the respective functional areas (maturity in this respect relates to the grade of how processes and organizational development compared to best practices).

57. Subsequently those processes were identified which might inhibit the increase in capacity delivery. These processes were then investigated against tangible

improvement potentials and to their suitability/timeline for achieving change under the different scenarios.

### **Project Process Optimization by Project Categorization (i.a)**

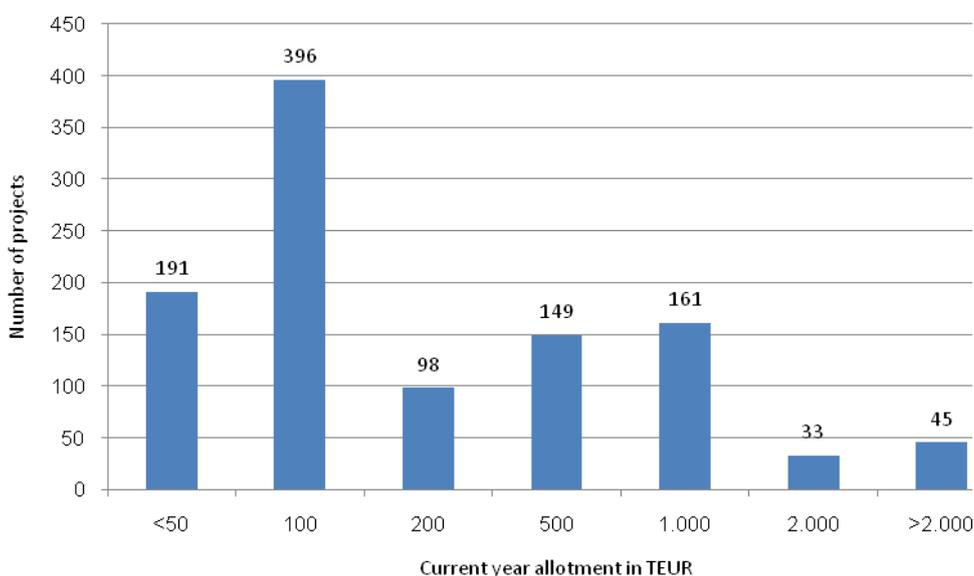
#### *Finding:*

58. All UNIDO Technical Cooperation (TC) projects make use of a similar project cycle process, irrespective of their size and type.

59. The Guidelines on Technical Cooperation Programmes and Projects indicate some differences, e.g. in documentation, however the major overall processes (i.e. identification, formulation, review and approval, implementation, monitoring) follow similar sub-processes and steps.

60. A distribution of project sizes according to the total allotment (PAD) of the year 2009 is shown in the figure below. This figure makes evident that the largest number of projects have allotments lower than €100,000, however use nearly the same processes as the complex projects ranging above €1 million.

#### **Number of projects by current year allotments**



#### *Solution:*

61. Utilizing Deloitte's experience in similar organizations with a project focus (both public and private, drawing also on Deloitte's own project delivery method) a differentiation of processes according to project category is an established best practice. This categorization will (a) enable fast tracking of less complex projects, (b) streamline standard projects while maintaining accountability and (c) deploy dedicated support for large/complex projects.

62. Different types of projects through differentiation by size, content, complexity or any other category of suitable distinction require different processes with

different levels of attention on each stage of the project cycle. One key success factor in enabling speedier delivery and raising delivery capacity is a shift of attention from the large group of less complex (sometimes smaller) projects to the larger and mostly more complex projects. Such a differentiation will require appropriate support and backup systems in order to be feasible.

63. This solution will support more efficient and specialized project management.

64. Meetings, publications, etc., that are currently managed as projects shall be treated on a different basis, if they have recurring character. In these cases project processes can be altogether avoided.

65. Another part of the solution is to make current stand alone projects part of other projects. As an example, "evaluation" projects may be integrated in the projects that are being evaluated.

#### **Simplification of Budget Structure (ii.a)**

##### *Finding:*

66. The existing budget structure used for projects at UNIDO leads to numerous budget revisions resulting in additional workload and resources shortage, impacting Project Management, Financial Services and other related areas.

67. The root cause is the large number of very specific and detailed budget lines, to which project related expenses have to be assigned. Even minor deviations from the original project plan result in requests for budget revisions, which have to be formulated by Project Management and to be processed by Financial Services upon approval by relevant bodies. Most of the current budget revisions have no or minor impact on the results or the set-up of a project and are therefore causing unnecessary effort and strain on resources within the organization.

##### *Solution:*

68. Adaptation of the existing budget line structure by consolidation of budget lines into more meaningful categories with required system support will reduce the current workload of Project Management and Financial Services. Project Management will gain more flexibility to perform project related work and Financial Services and other related areas will gain more time to concentrate on value adding tasks due to the fact that less budget revisions have to be processed.

69. Budget revisions for fund increases/decreases or a shift between the new categories of budget lines will still be necessary and essential for proper accountability.

70. In order to realize this recommendation, there has to be a detailed analysis of budget lines currently in use by Project Management in order to identify those budget lines, which are essential for Project Management purposes, taking RBM principles, donor requirements and proper expenditure controls into consideration.

#### **Simplified Approval Cycle for Human Resources (iii.a)**

##### *Finding:*

71. For optimum feasibility assessment two steps were done:

- Overall HR assessment ranking maturity relatively to state-of-the-art structures by using Deloitte methodology;
- Deeper assessment of selected HR processes, HR-IT and HR organization to estimate feasibility efforts including Deloitte's consulting and implementation experience.

72. Assessment of the three HR core processes (recruitment of regular staff, project personnel, performance appraisal system) showed a multi-level structure of decision-making and approvals along the organizational structure. The time and effort for end-to-end processing work is high and shows significant improvement areas in the semi-paper based workflows and utilization of the HR-IT-infrastructure.

73. Different conditions of employment with corresponding contract types apply to core staff and project personnel, varying in terms of length of contract, purpose of assignment, location and payment. This difference causes additional administrative workload handled by the HR-branch staff.

*Solution:*

74. A Business Process Reengineering methodology will support a substantially improved process-redesign to meet business needs. This work will build upon the work of previous internal BPR projects throughout UNIDO and integrate implementation of IT-supported workflows resulting in minimized manual efforts.

75. Processes will be remapped with focus on clear accountability of process owners and acceleration of end-to-end-time of process cycles. Electronic workflows will provide consistent approval and audit trails and reporting capability to identify process delays enabling further optimization.

**Reduce Procurement Cycle Time (iv.a)**

*Finding:*

76. As a support function, procurement is highly dependent on the operational requirements of substantive units.

77. UNIDO's current procurement processes are based on considerable manual effort, are almost completely paper based and have only marginal interfaces with the current finance system, resulting in a high workload of Procurement Services Unit (PRS) staff and high procurement lead-times.

78. Formal UNIDO procurement methods commence at the relatively low level of €20,000. For all procurements exceeding €70,000, recommendations for contract award are issued once-weekly, after closed meetings of the Procurement Committee for subsequent approval by the Managing Director, Programme Support and General Management Division (PSM). This process can take up to two weeks. Even though PRS is preparing the relevant procurement documentation for consideration by the Procurement Committee, it is not present during the Committee's deliberations when final recommendations are made.

79. Due to the nature and type of TC project deliveries, accountability in project procurement is occasionally unclear resulting in sub-optimal coordination of procurement deliverables.

*Solution:*

80. For an organization of the size of UNIDO and with similar purchase complexity, the above processes are too complex and time consuming.

81. We advise to simplify current solicitation processes, increase the procurement threshold level for formal procurements (up to min. €70,000) and use an automated workflow to enhance the oversight and efficiency of procurement activities. The advantages are a reduction of paper-based documents and a shorter procurement cycle time.

82. The workflow system should also cover the functions of the Procurement Committee and facilitate the final approval by the Managing Director.

### **Enhance Delivery Capacity**

83. Operational structures were identified which potentially inhibit the increase of delivery capacity. These structures were then investigated for potential tangible improvements and assessed for their suitability/timeline for achieving change in different scenarios.

#### **Put Emphasis on Specialized Teams (i.b)**

*Finding:*

84. High dependence of the project on individual project managers in each stage of the project cycle (i.e. identification, formulation, review and approval, implementation and monitoring) results primarily in sequential processing of tasks.

85. Project managers are involved to a large extent in all stages of the project cycle. This requires constantly high attention and highly qualified staff, being able to cover all stages. Individual strengths of project managers in different stages of the project cycle are only utilized in their own particular projects and not drawn upon to support other projects, lacking that specialized knowledge. The project managers are confronted with high workloads due to concurrent involvement in all project stages.

86. In particular, during the project implementation phase, the knowledge sharing on projects' activities, progress and the distribution of tasks between Headquarters and field offices are rather reactive (i.e. only when there is an urgent need to solve issues or report on some figures).

*Solution:*

87. Establish specialized team structures along the stages of the project cycle. This will enable better concentration on specific tasks and in turn have a positive effect on quality.

88. The better a team member can focus on her/his assigned work, the more efficiently tasks will be performed. Taking this into account, a specialization of professional support during the formulation and implementation phase will contribute to more successful projects and shorter cycle times. More support on focused work ensures better quality and more professional work.

89. This in turn requires redefinition of roles and a process redesign. It should further allow the use of specialized cross project teams or dedicated functional support during the implementation phase in each country/region, which is also in line with the UN system-wide coherence process.

#### **Improve input capacity for financial data (ii.b)**

##### *Finding:*

90. There is a lack of availability and timeliness of financial data due to insufficient integration of field/project offices. At the time being, most field/project offices do not enter their financial data directly into the central ERP-System (the current finance system) on a timely basis due to connectivity issues, insufficient user friendliness of the system and a lack of input capacity in the field.

91. Regarding the connectivity issues the field/project offices are often in the situation that a stable connection to the central ERP-System cannot be established or sustained due to insufficient IT infrastructure or system set-up in the affected location.

92. Furthermore, the user interface for the personnel using the ERP-System in the field/project offices is not sufficiently user friendly and self explanatory. Due to insufficient experience and knowledge of the personnel in the field/project offices on the processing of financial data with the ERP-system, financial data are not entered on a timely basis resulting in a lack of up-to-date information.

##### *Solution:*

93. Improve input capacity for financial data within field/project offices as well as provide better user interface and connectivity to the ERP-System.

94. Strengthen local ERP know-how of staff in the field/project offices especially through appropriate training of local staff and the temporary provision of skilled resources.

95. In order to support the acceptance of the ERP-System the user interface has to be optimized, especially with respect to the requirements of the field/project office personnel. Additionally, measures for the improvement of the connectivity of field/project offices to the central ERP-System have to be taken.

#### **Optimize HR-Alignment to Business Needs (iii.b)**

##### *Finding:*

96. Assessment of current recruitment processes of project personnel showed the non-utilization of a centralized roster for selection of experts, which prevents optimum recruitment.

97. Due to staff shortage and the non-utilization of a centralized roster currently no dedicated HR-staff are responsible for project personnel roster updates and validation. Compared to best practices, a significantly high proportion of the workload is currently spent on administrative work at UNIDO.

*Solution:*

98. Creation of a centralized roster of pre-approved experts, maintained with minimum manual input by a roster coordinator (HRM). This will simplify the recruitment of experts in terms of speed and duration. Improved empowerment of project managers during the recruitment process with increased accountability will make better use of the combined knowledge in the organization on personnel to be hired.

99. The targeted roster application will provide advanced functionalities in order to electronically process all relevant actions in respect of project personnel. Features shall include automatic update reminders, filter options on skill-level and mandatory assessments of project personnel and consultants by project managers, accessible to all eligible core staff.

100. HRM will support business by assigning HR-staff-members to maintain, validate and control a centralized framework roster system as well as perform reporting based on proper analysis of demands raised by business.

101. According to Deloitte Research, an integrated approach of business process reengineering linked with organizational alignment result in an optimization of HR efficiency which will free up resources for upstream policy development and other core HR functions, such as staff counselling, client servicing, etc.

**Optimize Procurement Strategic Planning and Reporting System (iv.b)***Finding:*

102. To enable better cooperation with substantive units, a procurement plan was initiated to allow a better forecast of upcoming requisitions. The plan, however, lacks a detailed product classification. Opportunities for consolidated procurement are limited due to the highly specific nature of individual technical cooperation projects. The procurement plan is not regularly updated and not efficiently used by requisitioners due to delayed/incomplete data.

103. As a result, PRS almost exclusively deals with ad-hoc requisitions (less than US\$ 32 million of project procurement costs were captured in the procurement plan from the original US\$ 80 million of allotments).

*Solution:*

104. In line with other international organizations, UNIDO has to be able to forecast/utilize requirements planning for strategic procurement (e.g. for some types of goods/services regularly procured under Headquarters' procurement) in the sense of category management. The following steps are recommended:

- Strategic classification of goods and services where reasonable;
- Projects have to follow a simple procurement plan structured into these groups/categories of goods and services where reasonable;
- An adapted procurement process and a definition of category strategy (framework agreement, volume concentration, specification improvements, etc) is to be applied to every group/category of goods and services where reasonable;

- For standardized products the use of eProcurement/eSourcing or an eProcurement platform (product catalogue) is recommended.

105. Through strategic planning, by consolidating and grouping requirements on a cross-project basis, higher procurement efficiency and cost savings will be realized. In addition, suppliers can be listed according to the group/category of goods/services and framework agreements can be concluded. A solution, incorporating an automation of procurement forecasting, category planning and contract management as part of project preparation, will reduce the number of one-off procurement processes. This will be further enhanced by using framework contracts, category management and pre-qualification.

106. UNIDO would then be able to process a larger procurement volume, concentrate on supporting more complex projects and shorten the lead time on product category purchases.

107. This would result in better transparency of procurement activities (automation of data collection) leading to time savings, a reduction of compliance risks and errors during procurement transactions.

108. Earlier information/planning for procurement needs before the funds are actually available might lead to shorter overall procurement lead times. Based on project related procurement plans, key elements of strategic procurement can be introduced (e.g. category management).

### **Increase Efficiency of ICT Tools**

109. Selected IT-Systems/manual procedures were identified which potentially inhibit the increase of delivery capacity. These systems, or rather the lack of them, were investigated against tangible improvement potentials and assessed for suitability/timeline for achieving change in the different scenarios.

### **Increase Project Delivery and Quality by Project Monitoring (i.c)**

#### *Finding:*

110. Standard tools for project management are insufficient and the process is still very much paper-based. With the exception of centrally collected financial figures in the finance system, which are oriented on budget lines, there is no standardized organization-wide project performance management available.

111. Each TC branch creates differently shaped, regular financial reports, often donor driven, in order to get an overview of the project status. The reporting is not automated and it is associated with frequent manual adjustments in order to set up reports according to the given requirements. Data conversion from a budget line to one based on result or milestone is often prone to errors.

112. Project monitoring is supported by tools and electronic data only by financial figures from the current finance system. No cross-organizational comparison of status reports on an electronic basis is available.

*Solution:*

113. Adopt a project management tool for real time analysis. Best practice tools have to be assessed and the best fit acquired to enable Results Based Management (RBM).

114. Effective project performance monitoring systems must be backed up by the use of information technologies. A comprehensive information management strategy and its successful implementation will ensure the quality of status reporting. This includes, for example, time recording according to time spent on specific projects. The more integrated the system, the higher the validity will be.

115. The project monitoring system must incorporate project milestones and results, i.e. outputs and outcomes, to enable real time milestone or results based reporting, without additional manual adjustments. Supported by colour-coded indicators, regular and automated updates will highlight the need for management action. This will also contribute to a better-supported RBM process. A concept of the integration of such functionalities into the system has to be developed.

**Automate External and Management Financial Reporting (ii.c)***Finding:*

116. Numerous financial reports for management and donor requirements are created manually due to missing system support.

117. In order to satisfy the information requirements of UNIDO management, Financial Services has to prepare recurring and ad hoc reports. These reports are mainly manually created, due to the fact that the finance system in place is not configured in such a way so as to produce the automated reports. The data required for the generation of reports is extracted from both the current finance system and other non integrated systems (e.g. travel system, payroll system) and then manually processed. This approach is inefficient and time-consuming.

118. Apart from management reporting, UNIDO is also obliged to report externally to donors. External reporting has to meet the specific requirements of donors and UN institutions. About 4 to 5 years ago most of the reports were electronically generated, but the requirements of the recipients have changed since then and the finance system is no longer configured to capture information to support automated external reporting. As a consequence, the generation of donor reports requires manual production.

119. Therefore the management and donor reporting process is very time-consuming and creates a considerable workload throughout the Organization.

*Solution:*

120. For the automation of management and donor reporting it is necessary to evaluate both the capabilities and the current configuration of the finance system and the information requirements of management and donors. As a result of this evaluation it has to be decided, if a configuration of the current finance system, including the interfaces to other existing systems, is possible and sufficient or if an additional reporting solution has to be implemented. Additionally, new standard

reports have to be designed in accordance with the requirements of management and the donors, to support recurring reporting.

121. The automation of recurring management and donor reporting will reduce process delays, introduce system controls and allow Financial Services to concentrate on value addition.

### **Integrate HR-Information Technology (iii.c)**

#### *Finding:*

122. Several non-integrated stand-alone solutions support currently various HR-processes, which are interfaced to a minor extent. Workflows are broken and semi paper-driven, resulting in repeated entries of data series. Systems are linked by up to 40 batch jobs on diverse platforms. One major concern is the limited availability of individual resources that are able to maintain the mainframe based system after 2010.

123. HR-reporting is based on data retrieved from the various non-integrated, stand-alone systems. The manual preparation and processing of data causes increased effort and workload for the HR-staff in order to perform the recurring HR-reporting requirements and limits data consistency when repeated.

#### *Solution:*

124. Implementation of a web-accessible HR-IT-System with state-of-the-art functionalities, integrated within a landscape covering finance, project management and procurement.

125. IT-selection will be based on the ability to customize and meet UNIDO's demand, best practices assessed within other UN organizations, and cost. Main value drivers are accelerated workflow cycle time, accessibility from outside Headquarters, standardized HR-reporting and metrics and audit trails.

126. A matching IT system shall include Employee Self Service (ESS) and Manager Self Service (MSS) functionalities as these support project-orientated organizations, like UNIDO.

### **Automate Procurement Functionalities and Processes (iv.c)**

#### *Finding:*

127. A formal procurement action is required for all procurements valued at €20,000 or higher, requiring considerable manual effort and processing by PRS staff and lengthy administrative lead times.

128. UNIDO's procurement processes and practices are not automated. The currently used IT-system offers neither a contract management nor eProcurement/eSourcing modules. These will have to be purchased separately.

129. There is no automated business work flow, impairing management to have overall control and oversight on the status and progress on procurement plans, procurement requisitions, purchase orders and contract implementation.

130. There are only basic procurement and contracting related reporting functionalities available.

*Solution:*

131. For the start of the purchase cycle, software including contract management and integrating with the financial transactions of purchasing has to be acquired and supported. This software, covering the entire procurement management, has to be deployed with its full range of functionalities at Headquarters and with appropriate functions to support procurement activities in the field offices. This will enable PRS to focus more on suppliers and market analysis.

132. Furthermore, automated orders for standardized products will accelerate the cycle time and enable dealing with higher purchase volumes with minor manual intervention within established guidelines. In the medium to long run the current finance system's procurement functionalities need to be reviewed in relation to UNIDO's medium and long-term procurement requirements. UNIDO staff in the field has to be familiarized with the procurement platform and IT in general.

**Strengthen Accountability**

133. Across all functional areas the introduction of an electronic workflow, supported by document archiving, can provide a tangible improvement and was analysed according to suitability/timeline for achieving change in the different scenarios.

134. Additionally accountability will be greatly strengthened by the expansion/introduction of a standardized formal risk management process and systems based on RBM principles.

**Workflow and Archiving****Workflow***Finding:*

135. Most processes within UNIDO show system breaks (Change of medium from electronic to paper and vice versa) due to manual approval steps and the necessity of data transfers between non-integrated systems.

136. These system breaks appear when an electronic document is converted into paper (e.g. printout), a paper based document is converted into an electronic document (e.g. manual data entry into a system, facsimile, scan) or data has to be transferred manually from one system to another due to missing electronic interfaces.

137. Many system breaks emerge from approvals. The approvals for certain transactions are given by a signature on printouts of electronic documents followed by scanning the signed documents to make them available in an electronic version again. This proceeding is inefficient, unsafe and time-consuming.

138. Several UNIDO systems are not integrated with electronic interfaces e.g. travel and finance systems causing system breaks and making manual data transfers between different systems necessary. This leads to inefficient, unsafe, and time-consuming processes and makes it difficult to trace back the origin of data.

139. Furthermore system breaks bear the continuous risks of data manipulation, data loss and process delays. Therefore, they have to be avoided.

*Solution:*

140. Enhance electronic workflow and approval management and implement system interfaces to make real efficiency gains.

141. Evaluate current UNIDO processes with respect to system breaks, identify affected processes and implement electronic workflows where appropriate. Avoid signing of paper documents and transfer approval activities into electronic workflows.

142. Migrate paper-based processes to electronic workflows in order to speed up processes and to avoid data manipulation and data loss.

143. Implement system interfaces, where applicable, to avoid manual data transfers.

**Archiving (d)**

*Finding:*

144. Archiving of documents is mainly paper-based.

145. Most of the processes in scope are paper-based, thus creating an enormous number of documents, which are primarily archived as hard copy. This method is both labour intensive and time consuming for filing as well as retrieval.

*Solution:*

146. Implementation of an electronic archiving and document management solution.

147. Following best practices findings at Deloitte's clients in the public sector the introduction of an electronic archiving solution reduces workload, saves space and facilitates locating of archived documents, especially during audits. The evaluation of an appropriate archiving solution requires detailed analysis regarding the possibilities of integration into the current systems.

**Risk Management**

*Finding:*

148. Within UNIDO there is no formal, standardized organization-wide Risk Management Framework established. Tools are missing for an integrated overview or consolidated information about the risks relevant for UNIDO. Risks affecting the whole organization or individual projects are generally known by responsible management but not identified, assessed, monitored and managed in a standardized and structured way. Therefore, an integrated overview about critical issues relevant for UNIDO is not available on a short notice.

149. Tasks and responsibilities regarding Risk Management are embedded in the functional roles of line-managers within the organization. Currently, it is the responsibility of each manager to take care of the specific risks of his or her unit or project and to set appropriate mitigation measures. Critical issues are identified in principle but not monitored or managed in a standardized way.

150. The current Risk Management activities performed at UNIDO are not supported by an appropriate Risk Management Tool. Therefore, managers dealing with risks rely on individual IT Tools, which are not integrated in any way or supported by the central IT service.

151. Due to the missing Risk Management Framework the current risk exposure for UNIDO is uncertain. Risks can affect UNIDO without appropriate mitigation measures resulting in the loss of reputation and money. Especially project risks have to be better attended by appropriate tools.

*Solution:*

152. Set up of an organization-wide Risk Management Framework covering project risks as well.

153. Setting up an efficient Risk Management framework requires defined processes, roles, responsibilities and tools. The first step within the Risk Management process is the identification of risks relevant for UNIDO within predefined risk categories. The following assessment of the risks is necessary for the prioritization of the identified risks in order to focus on the risks with the most impact on the organization. Especially for critical risks, mitigation measures have to be defined to either accept or avoid the occurrence of risks, to reduce the impact of risks, or to transfer risks. Once the risks have been identified and assessed and mitigation measures have been defined, the risks and the measures have to be monitored regarding their current status and their development on a regular basis. In this context a Risk Management Reporting has to be defined and integrated into the existing Management Reporting.

154. A defined and documented Risk Management process will assure an accurate and standardized treatment of risks in order to avoid or reduce reputational or financial damage in case of risk occurrence. The definition of clear roles and responsibilities within the Risk Management Process is a necessary prerequisite to ensure that the risk portfolio of UNIDO is monitored, updated and managed regularly in an efficient way.

155. In order to support the Risk Management activities in an efficient way, an appropriate IT Tool has to be selected and implemented across the whole organization. This Tool has to support the efficient identification of risks (e.g. by using predefined risk catalogues), the assessment of risks, the definition of mitigation measures to manage risks and the monitoring of risk status and development. Due to the fact that the risks UNIDO is facing are to a great extent project related, the management of project risks has to be supported by the IT Tool as a primary focus. According to the decentralized structure of UNIDO, with a central Headquarters and decentralized field/project offices, the consolidation of risks should be a relevant feature for the IT Tool.

156. An organization-wide Risk Management Framework will increase transparency regarding risks and permit an easy information exchange within the organization.

## **Increase Effectiveness**

157. All above dimensions of change aim at increasing the effectiveness of UNIDO's delivery capacity. In Deloitte's experience with similar organizations, facing a potential system replacement, efficiency/effectiveness gains of up to 30 per cent are possible when Business Process Reengineering is performed before systems are replaced and the effectiveness criteria are part of the evaluation for the selection process for the future system.

158. In Deloitte's view, this up to 30 per cent gain would allow channelling of the capacities absorbed by current labour and paper based processes into the technical cooperation activities. The automation would also allow a better integration of field offices into the core operations of the Organization. Such efficiency/effectiveness gains, together with all other direct benefits from increased integrated system support, should allow UNIDO to significantly increase its delivery capacity and do more in its core functional area.

159. There are high priority solutions in the dimension of process change that have no direct costs associated with them, but will only work effectively if they are supported by a system change, as envisioned in Scenarios II, III and IV, thus only being realized by a system change or upgrade.

160. These process changes are then the enablers for enhancing the delivery capacity by actually simplifying operations. Increased efficiency/effectiveness can only be reached with a simplified process before it is automated – and it is quite an effort to change a process covering several integrated functional areas.

161. In terms of a project management system, this approach has to be integrated with the planning, monitoring and evaluation needs for project management cycle and incorporated in any new system.

162. By way of example, in the HR function, re-engineering the consultant recruitment process will lead to significant efficiency gains as pre-selection of consultants currently takes up to 16 steps. Best practice suggests this can be reduced to two to three steps. Thus clear gains in effectiveness and efficiency can be achieved and support the efforts in doubling capacity.

## **6. Implementation Scenarios Adapted to UNIDO**

163. A prioritization of possible solutions, following the above dimensions, best practice examples and Deloitte's experience with similar organizations, was utilized to find solutions for viable alternative processes and operational structures for UNIDO, taking into consideration the current system and IT architecture as well as possible future changes according to the four generic implementation scenarios.

164. The findings and solutions were grouped according to their relevance regarding process changes, structure optimizations and potential change of ICT tools. The established scenarios are primarily differentiated according to their change impact, but their implementation speed as well as to overall costs and potential support of the goals of increasing the service delivery capacity, improving transparency, supporting the UN system-wide coherence process, improving the

utilization of the organization's capacities both at Headquarters and field levels, reporting based on RBM principles, etc, were also considered.

165. To support UNIDO's vision of change, four different generic scenarios are feasible, which cover the whole spectrum from purely reactive change to a changing environment and outside pressures up to a proactive rebuilding of the overall supporting infrastructure, including the restructuring of ICT tools.

166. Four possible specific implementation scenarios were developed for UNIDO. Scenarios I & II are reactive to change requirements, Scenarios III and IV are proactively anticipating change aimed at achieving the vision.

### **Reactive Scenarios**

#### **Implementation Scenario I – Status Quo**

*Maintain current processes and systems, resulting in no visible change*

167. Maintain current processes and systems. The change process is reactive to pressure or growing demands, but not necessarily from within the organization. Little to no long-term change can be achieved with this scenario.

168. UNIDO's current HR mainframe system, the lack of procurement system support and insufficient tools to support project management will only be changed due to donor pressure or outside demands. Processes will remain as they are, capacity to deliver is not enlarged and UNIDO will not be able to meet its challenges and maintain its competitive edge.

169. The proposed solutions for improving process productivity can be delivered partially in this scenario if a stringent BPR-methodology is followed across the whole organization. At the same time, the goal of higher accountability and raising the effectiveness cannot be reached due to the fact of no additional investment. Delivery capacity can be slightly enhanced if all proposed solutions for enhancing capacity are implemented.

170. ICT tools are NOT efficiently used or even available when needed, posing, e.g. a great risk to strengthening accountability, implementing RBM and not increasing productivity at all by continuing to do project planning, monitoring and evaluation basically without IT tools. The lack of investment into automated workflows, archiving and additional risk management tools poses a great threat.

171. Ad-Hoc reactive investments for e.g. a replacement of the HR system will be very expensive and not be based on a long-term plan or vision.

- **Strengths:** Low to no additional investments today, no need to change current systems and processes;
- **Weaknesses:** Limited scope to increase delivery capacity to meet increased demand and short-term inability to meet Member States and donor requirements (e.g. GEF fiduciary standards);
- **UN system-wide coherence:** This scenario does NOT support the system wide coherence process, except in the current financial reporting;

- **Risk:** With every year, the probability of a system breakdown and non-fulfilment of donor requirements rises to a level that will prohibit UNIDO from fully performing its services;
- **Cost/time estimate:** Within current operating costs for the next 2-3 years, after which immediate funding will be needed for ad-hoc replacement of systems/processes as they become obsolete. This will be especially the case in the area of HR, depending on mainframe technology and project management needed to fulfil donors requirements within a risk and control framework;
- **Conclusion: NOT RECOMMENDED** – seriously endangering UNIDO operations and services to Member States.

## Implementation Scenario II – Incremental Improvements

*Invest sequentially in processes and separate systems over multiple budget periods, resulting in a non-integrated system architecture*

172. Invest sequentially in processes and separate systems over a longer time frame, following an evolutionary path based on situation and circumstances. Change is incremental and mainly subject to availability of funds, people and reaction to pressure, and not with a clear vision for the whole picture of change.

173. UNIDO will invest sequentially in processes, IT tools and systems including project management, analytical reporting, HR system replacement and procurement enhancements over several budget periods. With donor pressure to fulfil certain requirements this sequence can and will be changed reactively.

174. The proposed solutions for improving process productivity can be delivered in this scenario only if a stringent BPR-methodology is followed across the whole organization. This requires simultaneous coordination in several functional areas. Delivery capacity can be enhanced over a long time span if all proposed solutions are implemented in sequence of IT tools and system replacements.

175. ICT tools are not efficiently integrated or even in place when additional requirements arise. UNIDO will only be able to react to changing demands, possible changes are effected, which will in turn be only available at least one budget period later. Solutions proposed for workflow cannot utilize parallel changes in all functional areas, rendering them inefficient for several years and definitely not increasing effectiveness at all. The ineffective investment into automated workflows and archiving and additional risk management processes pose a great threat to the capability to act on current requirements i.e. by donors for project reporting or the threat of discontinuation of the mainframe for HR processing.

- **Strengths:** Staggered investments to change selected systems and processes primarily using internal staff resources;
- **Weaknesses:** This lengthy process places high demands on capacity to change. Lack of integration in changing systems and processes leads to sub-optimal use of resources;
- **UN system-wide coherence:** This scenario can support the system-wide coherence process if the additional investments are channelled towards

interoperability and interfaces with other UN organizations' processes and systems. However, there is a limit to that in respect of the need of integrated information architecture, which is not foreseen in this scenario;

- **Risk:** Inability to reach the required level of operations and delayed compliance with external requirements and expansion of scope over time resulting in higher costs;
- **Cost/time estimate:** Total external costs of at least €10 million (€1 to 1.5 million annually) plus internal capacity for the whole duration. There are constant costs for parallel processing and the need of additional support for connecting to areas not yet affected by the initiative. Estimated duration of investment to reach full capacity as envisioned is eight years, mainly due to the sequential investments and the need for temporary solutions;
- **Conclusion: NOT RECOMMENDED** – will not allow timely achievement of required capacity and compliance with external requirements.

### Proactive scenarios

## Implementation Scenario III – Holistic Change

*Invest simultaneously in processes and integrated systems; achieving ERP functionality around and connected to the existing finance system*

176. To achieve the change vision, invest simultaneously in a short time frame in processes and integrated systems with an implementation roadmap to realize the goal. The vision is built around essential components of the current systems, utilizing existing knowledge and motivation from within the organization. This is supplemented by a mandate to change as quickly as possible.

177. The parallel investment in different systems, such as Human Resources including payroll or Project Management, towards enabling Results Based Management allows the elimination of current inefficiencies and the adaptation to current and future requirements of management and donors in a short time frame.

178. The current finance system is maintained and used as a basis for all other systems. The knowledge of UNIDO personnel of the existing system is utilized and dispersed even further into the field offices and project sites. The renewal of existing systems around the finance system is integrated with automated workflows and risk management tools (e.g. timely production of reports).

179. In this scenario, all solutions towards this goal are considered simultaneously with their effects on the finance system. The holistic change approach of Scenario III is well suited to create a sense of urgency within the organization. Therefore it can be expected that the support of the affected personnel can be maintained for the time needed to realize changes.

- **Strengths:** Simplifying processes through a BPR exercise as a one-time investment against a known base-line. Building on some existing systems and processes allows rapid simultaneous investment in all areas to reach capacity targets and comply with external requirements. Supporting staff motivation and willingness to change;

- **Weaknesses:** High demands on all parts of the organization, high requirement for outside support in order to be able to affect the change in a short time frame;
- **UN system-wide coherence:** This scenario supports the system-wide harmonization process by considering interoperability and interfaces with other UN organizations' processes and systems already in the design phase of the implementation. This will be especially the case for the new project management system, supporting Results Based Management;
- **Risk:** Sub-optimal integration of processes and systems;
- **Gains:** Short-term results are possible by enabling UNIDO to implement larger projects more quickly. Within a timeframe of 4-5 years the delivery capacity can be doubled in this scenario;
- **Cost/time estimate:** One time external costs of about € million, including short term parallel processing. Estimated duration to reach full capacity is three years, starting with BPR to enable a common workflow;
- **Conclusion: RECOMMENDED** – most cost effective scenario in achievement of required capacity and compliance with external requirements. This scenario can be assessed as fulfilling the operational needs of UNIDO for several budget cycles (five to ten years), depending mainly on the software-release cycles of the core finance system.

## Implementation Scenario IV – Fundamental Rebuilding

*Replace all existing systems and related processes, replacing the finance system and all other modules by an integrated ERP*

180. Replace all existing systems and related processes by a new ERP system, based on a single common vendor and around a single platform. The solution is based on the selected system's capacity, depending to a large extent on the right fit of the current and expected requirements of the selected package.

181. The adoption of this scenario has to start with a full Business Process Reengineering exercise to simplify processes, in parallel to the selection of potential software systems. A prototyping approach to quickly analyse the suitability and needs for adaptation has to build upon the reengineered, simplified processes.

182. The actual replacement of the existing systems at UNIDO will then be in parallel to the realized gains by using parts of the newly implemented system (in a prototype, first release mode) for e.g. selected projects or selected functionalities, such as payroll processing, ahead of introducing the full system.

183. A fundamental redesign of the operational processes and organizational structure, as well as the underlying IT systems, bears several risks, which have to be managed carefully. Fundamental redesign is an extraordinary burden for the whole organization without an upfront guarantee for a successful change.

184. The advantages of implementing Scenario IV are the streamlined business processes supported by a fully integrated ERP system. Within the context of the

UN system-wide coherence process, interfacing will have to be an integral part of the design.

- **Strengths:** Simplifying processes through BPR as a one-time push. Replacement of all existing systems by a new ERP system allows rapid simultaneous investments in all functional areas to reach capacity targets and comply with external requirements;
- **Weaknesses:** High demands on the organization, high dependency on external support to be able to affect the change due to total replacement and may be disruptive in the short term;
- **UN system-wide coherence:** This scenario allows the support of the system-wide coherence process by considering interoperability and interfaces with other UN organizations' processes and systems already during the selection of the new system. This support of common systems or procedures is a key point in the software selection;
- **Risk:** Functionality of the selected ERP and its adaptation will initially not fulfil or match the organizational needs and capabilities of UNIDO;
- **Gains:** Long-term results are supported strongly by enabling UNIDO to run larger projects more quickly. Within a time frame of 5-7 years the delivery capacity can be more than doubled in this scenario;
- **Cost estimate:** One-time external costs of at least €20 million, including parallel processing for most of the project duration. Estimated duration of investment to reach full capacity is five years, longer duration is mainly due to the replacement of the core finance system;
- **Conclusion: RECOMMENDED** – most technically viable and comprehensive solution that allows custom adaptation of the chosen system to exactly match UNIDO circumstances and requirements in one integrated package, albeit at higher costs. This scenario can be assessed as fulfilling the operational needs of UNIDO for a time-span of several software releases, typically for 10-20 years.

## 7. Conclusion

185. The four different scenarios in the context of UNIDO are compared in the figures below and their main dimensions are depicted in separate lines.

### Cost/Risk Analysis

186. The following table compares the main components for external costs estimated in each scenario. Each line compares the approximate external costs, the estimated time for conclusion and the estimated additional internal costs. All numbers are in €million.

Table V

Scenarios	I Status Quo	II Incremental Improvement	III Holistic Change	IV Fundamental Rebuild
<b>Total external costs in €m</b>	depending on ad hoc requirements	<b>10</b>	<b>9</b>	<b>20</b>
Software and Hardware		2.5	2.5	4
Implementation Partner		3.5	3.5	7
CM and BPR experts		2	1.5	4
Training		0.3	0.3	1.0
Replacement costs of staff		1.0	0.5	2.0
Project Control		1.0	0.8	2.5
<b>Estimated timeline</b>		<b>8 years</b>	<b>3 years</b>	<b>5 years</b>
<b>Additional Internal Costs</b>	<b>none</b>	<b>high</b>	<b>medium</b>	<b>very high</b>

187. The cost analysis is based on similar project requirements in public and/or NGO environments, considering the required modules of commercial packages currently available and adaptations necessary for UNIDO. Experiences with other UN organizations and change initiatives similar to Scenarios III and IV have been taken into consideration while arriving at the above figures.

188. The costs depicted are one-time costs. Scenarios II and III will have additional running costs, which can be covered from shutting down existing systems and applying efficiency gains. As for Scenario IV, there are higher increases in operating costs than those in Scenarios I to III.

189. Although well-structured, the current IT department is very small and the support for a totally new ERP system will thus create additional costs and an expansion of maintenance and support services. Here different modes of operating the actual system have to be investigated during the system selection and considered as Total Costs of Ownership (TCO-model).

190. Regarding potential benefits and gains within each scenario, Scenario III allows a doubling of capacity after 3-4 years. In Scenario IV, capacity will not rise until year 4 to 5 but afterwards it will be possible to get an even higher throughput with the same structure. In other words, efficiency/effectiveness gains are much higher in the new system of Scenario IV than in scenario III because the system is not constrained by the limits of integrating several modules/components around the existing finance system.

191. The following table summarizes several risk components towards the goal of enabling UNIDO to meet all its aims and challenges.

192. The entries for each scenario are a summary derived from the detailed analysis of each. When implementing one of the scenarios, all elements have to be considered together since they are partially dependent on each other.

Table VI

Scenarios	I Status Quo	II Incremental Improvement	III Holistic Change	IV Fundamental Rebuilding
Process change	None	Sequential	Simultaneous	Simultaneous
Implementation Costs	Varying	High	High	Very high
Annual Maintenance	Varying	High	Medium	High
Implementation Risk	High	High	Medium	High
Risk of lack of CM support	High	High	Low	Medium
Risk of low ERP Functionality	High	High	Medium	Low
Estimated timeline		8 years	3 years	5 years
Additional Internal Costs	None	High	Medium	Very high

### Recommendations

193. The table below compares the approximate external costs, the estimated time for conclusion and the estimated additional internal costs of all four scenarios.

194. The difference in effort between Scenarios II, III and IV lies primarily in the implementation time and the cost for implementation, each scenario yielding different potential gains to enable UNIDO to fulfil its goal of achieving a quantum leap in its capacity to deliver TC services to its Member States as well as creating efficiency gains.

Table VII

Scenarios	I Status Quo	II Incremental Improvement	III Holistic Change	IV Fundamental Rebuilding
<b>Total external costs</b>	*)	10 M€	9 M€	20 M€
<b>Estimated timeline</b>		8 years	3 years	5 years
<b>Additional Internal Costs</b>	none	High	medium	very high

\*) Scenario I does not have a timeline nor a cost estimate due to its purely reactive nature and ad-hoc need for investment when there is a need to fix or to respond to a potential breakdown in operations.

195. All four scenarios were duly analysed and evaluated. Considering their respective advantages and disadvantages, the following summarized recommendations are given:

**Scenario I: NOT RECOMMENDED** – seriously endangering UNIDO operations and services to Member States.

**Scenario II: NOT RECOMMENDED** – will not allow timely achievement of required capacity and compliance with external requirements.

**Scenario III: RECOMMENDED** – cost effective scenario to achieve required capacity and compliance with external requirements, integrating new processes and systems while keeping the current financial system.

**Scenario IV: RECOMMENDED** – most technically viable and comprehensive solution that allows custom adaptation of chosen new system to exactly match UNIDO circumstances and requirements in one integrated ERP package, including a finance system, albeit at higher costs and in a longer time frame.

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