

Feasibility study into integrated End-to-End Statistical Solution for GCC-Stat



Introduction:

Project scope and objectives

Background information on international standards



Introduction

Project scope and objectives

Project scope

To support GCC-Stat in:

- ✓ Improving the quality and quantity of statistical products
- ✓ Developing and expanding statistics dissemination
- ✓ Aligning the national statistical strategies in the GCC countries
- ✓ Establishing a culture of excellence in GCC-Stat building effective business systems and processing

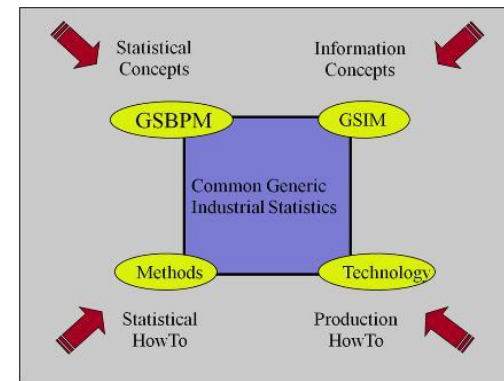
Project goals

- ✓ To assist GCC-Stat in **assessing the data that is exchanged** among all six countries as well as the current metadata system
- ✓ To support GCC-Stat in **developing the new, more efficient IT system**, software tools and ICT infrastructure

Strategy to face the statistical challenges

I. Guidelines from **international standard models** and good practices for the modernization of statistics

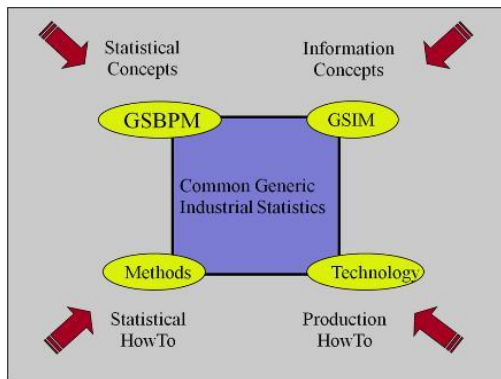
- Generic Statistical Information Model (**GSIM**)
- Generic Statistical Business Process Model (**GSBPM**)
- Common Statistical Production Architecture (**CSPA**)
- Statistical Data and Metadata eXchange (**SDMX**)
- Data Documentation Initiative (**DDI**)



II. **Benchmarking** with previous experiences in other international / regional organizations (Eurostat, Mercosur, European Central Bank, IMF, etc.)

Background information on international standards

International standards tested and widely used



Quality Management / Metadata Management								
1 Specify Needs	2 Design	3 Build	4 Collect	5 Process	6 Analyse	7 Disseminate	8 Archive	9 Evaluate
1.1 Determine need for information	2.1 Outputs	3.1 Data collection instruments	4.1 Select sample	5.1 Standardize and anonymize	6.1 Acquire domain intelligence	7.1 Update output	8.1 Define Archive rules	9.1 Gather evaluation inputs
1.2 Consult And Confirm	2.2 Frame and sample methodology	3.2 Process components	4.2 Set up collection	5.2 Integrate data	6.2 Prepare draft outputs	7.2 Produce products	8.2 Manage archive repository	9.2 Prepare evaluation
1.3 Establish output objectives	2.3 Variables	3.3 Configure workflows	4.3 Run collection	5.3 Classify and code	6.3 Verify outputs	7.3 Manage release of products	8.3 Preserve data and associated metadata	9.3 Agree Action plan
1.4 Check data availability	2.4 Data collection	3.4 Test	4.4 Load data into processing environment	5.4 Edit and impute	6.4 Interpret and explain	7.4 Market and promote products	8.4 Dispose of data and associated metadata	
1.5 Prepare Business case	2.5 Statistical processing methodology	3.5 Finalise production systems		5.5 Derive new variables	6.5 Disclosure control	7.5 Manage customer queries		
	2.6 Processing systems and workflow			5.6 Calculate weights	6.6 Finalize outputs for dissemination			
				5.7 Calculate aggregates				

Application of standard international models: Enterprise Architecture

Enterprise Architecture is a model of systems which are designed and built by connecting standard business capability, where the process elements are mostly implemented as **common services**

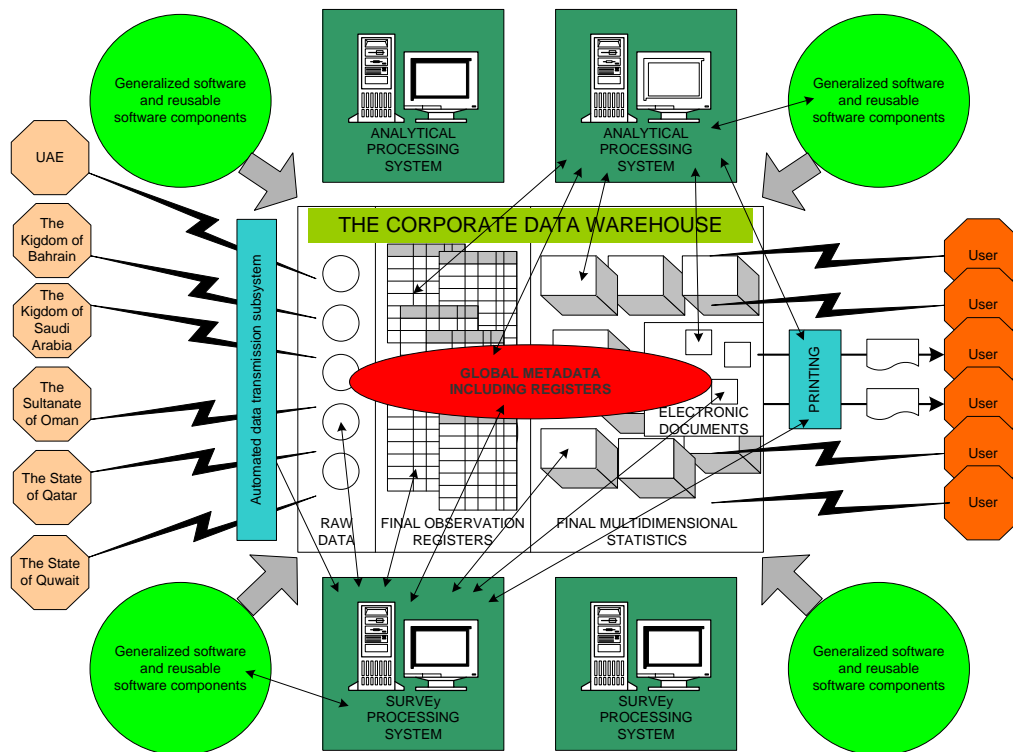
Enterprise Architecture is a model that

- **defines what the industry** – Official Statistics – does
- **how it is done** and
- **enables collaboration** in developing and using Statistical Services to create flexible business processes and systems for easier statistical production

Enterprise Architecture drives the Information, Application and Technology architectures for a statistical organization

Background information on international standards

Main components of integrated end-to-end solution and links between them



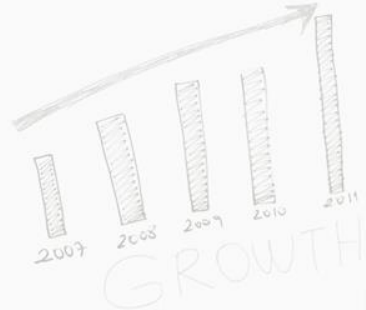


Approach and methodology:
Project activities and deliverables
Presentation of the technical expertise

BUSINESS STRATEGY → INNOVATION GROWTH



- HUMAN RESOURCES
- BUSINESS ETIQUETTE
- CROSS CULTURAL MANAGEMENT
- LEADERSHIP
- PRESENTATION
- COMMUNICATION
- TIME MANAGEMENT
- CUSTOMER SERVICE
- SALE
- BUSINESS ORGANIZATION
- CREATIVITY
- FINANCE PLANNING
- OTHER TOPICS

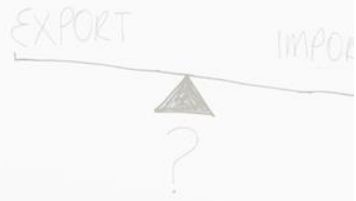


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BUSINESS PLAN
PROJECT DEVELOPMENT EXECUTIVE

BUDGET FINANCE

YES
OR
NO!



OUR MISSION
OUR VISION
OUR TARGETS
TEAMWORK

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VALUE

Approach and methodology

We see the project as two inter-connected activities:

- ✓ Assessing the statistical production and processes
- ✓ Assessing the ICT infrastructure and procedures

These assessments will include both processes in the **GCC regional office** and the **national ones**

The **link** between both activities is **based on the Enterprise Architecture approach**, ensuring that the ICT supports the business processes

Project activities

Activity 1: Analysis of statistical processes

Sub-activity 1.1: Analysis of statistical processes

Sub-activity 1.2: Analysis of current ICT system

Activity 2: Ex-ante analysis of end-to-end solution

Activity 3: Analysis of needs to implement an integrated end-to-end solution

Sub-activity 3.1 Business software system description

Sub-activity 3.2: ICT infrastructure upgrade requirements description

Activity 4: Gap analysis

Activity 5: Time-bound plan

Activity 6: Final report

Approach and methodology

Project activities

Activity 1: Analysis of statistical processes

Sub-activity 1.1: Analysis of statistical processes

Project leader – *Mr B. Bouchkhar* + *Team of subject matter experts*

Conduction of a comprehensive baseline analysis based on GSBPM: reviewing materials provided by GCC-Stat, discussing business processes and statistical domains concerned during the mission to GCC-Stat

Approach and methodology

Project activities

Activity 1: Analysis of statistical processes

Sub-activity 1.2: Analysis of current ICT system

Leading IT expert – *Mr K.Zeila* + *Team of IT experts – Globcom*

Conduction of a comprehensive baseline analysis following quality factors

Entire business vision, strategy and goals	Information to be gathered during from GCC-Stat internal and external documents available and personal interviews with the leading staff
GCC-Stat ICT improvement goals in accordance with ICT System upgrade	
Organizational structure of GCC-Stat	
Current business processes and the way to upgrade them	Assessment of ICT infrastructure by collecting information of hardware and software available for statistics production.
Description of the current business environment Hardware and software in use	

Approach and methodology

Timing and deliverables

Activity 1: Analysis of statistical processes

Will be implemented within **5 weeks** after the kick-off meeting and start of the contract

- *Project Manager:* After the kick-off meeting the **Project manager, Ms Dovile Minkeviciute**, will mobilize all necessary **subject matter experts** to conduct the assessment of relevant statistical domain.
- *Project Leader:* Each of them will prepare the report which after the mission will be sent to the **Project leader – Mr B.Bouchkhar** to include the information into the assessment report.
- *IT team leader:* **Mr K.Zeila** will coordinate a **team of IT experts** and based on findings will prepare the part of assessment report on the ICT structure.
- *Statistics experts:* **Statistics quality** experts, **Mr J.Vila** and **Ms F.Carausu**, will provide their views on the findings of the assessment to the report.

Deliverable: Assessment report

Approach and methodology

Project activities

Activity 2: Ex-ante analysis of end-to-end solution

Project leader – *Mr B.Bouchkhar* + *Leading IT expert* – *Mr K.Zeila*

Analysis of the current workflows in statistical production of the GCC-Stat and national statistical offices of GCC countries

Mapping following the phase of the GSBPM:

- ✓ Data collection from GCC countries
- ✓ Data processing
- ✓ Analysis of data
- ✓ Data dissemination

Project activities

Activity 2: Ex-ante analysis of end-to-end solution

Project leader – *Mr B.Bouchkhar* + *Leading IT expert* – *Mr K.Zeila*

The purpose of the study will be to:

- ✓ Provide an overview of the present system and discuss in detail the existing problems
- ✓ Identify the needs of users against existing problems and propose a set of solutions
- ✓ Define a set of criteria for the evaluation of solutions
- ✓ Set out main priority actions to be taken, as well as the sequencing of efforts
- ✓ Review and identify the necessary financial and human resources

Approach and methodology

Timing and deliverables

Activity 2: Ex-ante analysis of end-to-end solution

Activity will be implemented within **2 weeks**

Deliverable: Evaluation report containing the evaluation of end-to-end solutions on the market to be submitted together with the assessment report of Activity 1

Project activities

Activity 3: Analysis of needs to implement an integrated end-to-end solution

Leading IT expert – Mr K.Zeila and the team of IT experts

Defining detailed description for the integrated end-to-end statistical solution taking into account two parts:

- ✓ Business software system description
- ✓ ICT infrastructure upgrade requirements description

Project activities

Activity 3: Analysis of needs to implement an integrated end-to-end solution

Sub-activity 3.1 Business software system description

- ✓ System full functionality description comparing to GSBPM
- ✓ System architecture detail description
- ✓ User interface detail description
- ✓ Description of the system from secure data processing point of view
- ✓ System administration and maintenance requirements description
- ✓ System performance description
- ✓ Set of requirements to ICT infrastructure ensuring system stable and sustainable running

Project activities

Activity 3: Analysis of needs to implement an integrated end-to-end solution

Sub-activity 3.2: ICT infrastructure upgrade requirements description

- ✓ Overall technical infrastructure description
- ✓ Networking layer
- ✓ Server and storage layer
- ✓ Application layer
- ✓ Database management system layer
- ✓ Security layer
- ✓ Fault tolerance layer

Approach and methodology

Timing and deliverables

Activity 3: Analysis of needs to implement an integrated end-to-end solution

Activity will be implemented within **4 weeks**

Deliverable: List of requirements for an integrated end-to-end solution

Approach and methodology

Project activities

Activity 4: Gap analysis

Project leader – Mr B.Bouchkhar + Contract manager– Mr J.Cervera + Statistics quality experts – Mr J.Vila and Ms F.Carausu

Gap analysis – a process that helps an institution to understand and quantify the gaps that exist between its present and ideal expected future state

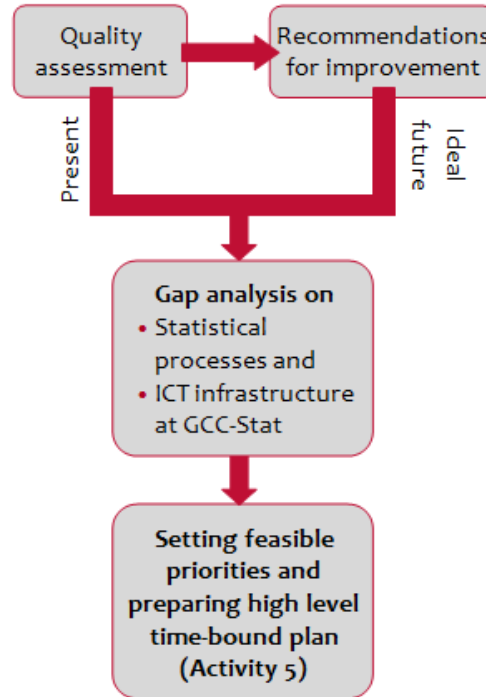
Gap analysis will be done based on the outcomes of Activity 1 and following each nine steps of GSBPM

Approach and methodology

Project activities

Activity 4: Gap analysis

IT infrastructure strategy gap analysis – analysis of the GCC-Stat requirements against the existing IT infrastructure strategies and forecast capabilities



Operational capability gap analysis – analysis that considers the existing demonstrated capability and operational effectiveness compared to the current organizational requirements

Approach and methodology

Timing and deliverables

Activity 4: Gap analysis

Activity will be implemented within **4 weeks**

Deliverable: Gap analysis

Approach and methodology

Project activities

Activity 5: Time-bound plan

Project leader – Mr B.Bouchkhar + Leading IT expert – Mr K.Zeila

Based on the assessment of current arrangements between GCC-Stat and six GCC countries , statistical processes and ICT infrastructure a high level time-bound, so called roadmap will be drafted. It will contain:

- ✓ Overall development plan underlining issues to be considered for future development
- ✓ Necessary improvements or changes in the six national statistics centers
- ✓ Timeframe and estimated costs

Approach and methodology

Timing and deliverables

Activity 5: Time-bound plan

Activity will be implemented within **5 weeks**

Deliverable: Time-bound plan – roadmap

In addition, a strategic plan with instructions will be presented to General Directors of GCC-Stat

The team will ensure a distance support to GCC-Stat even after the contract expiry date in order to maintain the successful implementation of the time-bound plan

Approach and methodology

Project activities

Activity 6: Final report

Project leader – Mr B.Bouchkhar + Leading IT expert – Mr K.Zeila + Contract manager – Mr J.Cervera

The final report will contain:

- ✓ All reports / deliverables drafted for each above mentioned activity
- ✓ Technical advices from project activities provided in various areas of statistics
- ✓ The comparisons of different solutions
- ✓ Conclusions and recommendations for development
- ✓ Time-bound plan / Roadmap

Approach and methodology

Timing and deliverables

Activity 6: Final report

Activity will be implemented within 3 last weeks

Deliverable: Final approved consolidated report

Approach and methodology

Time schedule

	Month 1				Month 2				Month 3				Month 4			
Tasks and activities	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
Kick-off meeting / start of the contract																
Assessment																
Evaluation of ETES																
Determination of requirements ETES																
Gap analysis																
Time-bound plan																
Draft final report and presentation													 			
Comments of final report from GCC-Stat																
Submission of final report with all the findings															 	
Progress meetings																
Final / sign-off meeting																

Staffing arrangements

Presentation of the team



Staffing arrangements

Presentation of the team – Contract manager – Mr José Cervera



More than 20 years of experience in all phases of the statistical production process, including the implementation of surveys and modernization of statistical processes

Director of DevStat as well as an international consultant in official statistics
In the field of international statistics involved in methodological support projects for Eurostat .

Scientific Director of the evaluation of the European Statistical Programme 2008-2012 and Team Leader of the evaluation of EU Member States' compliance with the EU Data Collection framework in Fishery Statistics.

Other regional projects, such as:

- Manager of the project on statistical cooperation EU-MERCOSUR
- Expert on Statistical Training for the Andean Community
- Team Leader of the EU-Mediterranean regional statistical programme (MEDSTAT 3) including Arab Mediterranean countries
- Trainer for regional courses in Latin America, French-speaking African countries, Arab countries, Asia-Pacific countries for ITU and UNCTAD

Mr Cervera will liaise with GCC-Stat as well as with the project team as often as needed to advise on project issues.

Staffing arrangements

Presentation of the team – Project leader – Mr Bouazza Bouchkhar



Statistician with more than 17 years of experience working in the Statistical Office of Morocco and as consultant to international organizations (UNCTAD, ITU, AFDB, SESRIC)

Has a strong background in economic, social and environmental sectors Experienced in Arab, African and Mediterranean regions and familiar with their statistical information systems.

In depth knowledge and understanding of European and international practices in the compilation of statistics and related metadata

Head of Transport and ICT statistics Unit for more than 12 years.

Since 2015, head of administrative data unit responsible for the collection of administrative statistics for different sectors, data processing and analysis and continuous development of sectoral statistics

Mr Bouchkhar will conduct assessment of specific statistical domains such as economic, transport, tourism and agriculture statistics

Staffing arrangements

Presentation of the team – Subject matter experts

Project manager will mobilize the SME and coordinate reporting.

All reports will be provided to the Project Leader for further assessment and drafting the assessment report

	Economic statistics	Price statistics	National accounts	Energy and environment statistics	Population and housing census	Foreign trade statistics	Monetary, financial and BoP	Tourism statistics	Social statistics	Labor statistics	Agriculture statistics	Transport statistics	Science & technology
Mohammed Achemlal	✓	✓	✓										
Leonidas Akritidis			✓				✓						
Giorgio D'Amore				✓									
Maarten Boon						✓							
Bouazza Bouchkhar	✓			✓				✓			✓	✓	
Jean-Michel Durr					✓				✓				
José Cervera													✓
Etienne Caruana								✓	✓	✓			

Staffing arrangements

Presentation of the team – Leading IT expert – Mr Karlis Zeila



Freelance consultant of statistical information systems with more than 20 years of experience in official statistics

Former Vice President of the Central Statistical Bureau of Latvia (13 years) responsible for a large number of projects in IT infrastructure and information systems development area thus developing the first Metadata Driven Integrated Statistical Data Management System (2002)

Experienced in management of the IT and information systems development projects in different areas of statistics.

Experienced in methodological issues related to statistics production in different statistical domains as well as in statistical processes ensuring full statistical life cycle according to GSBPM. Active participant in working groups of Eurostat and UNECE Statistics Division thus gaining an experience of international activities and international cooperation in official statistics field

Mr Zeila will be leading the whole IT team and will be responsible for the assessment of Business Software System, and together with the project leader, preparing gap analysis, time-bound plan and consolidated final report

Staffing arrangements

Presentation of the team – Senior ICT expert – Mr Norberts Talers



Current vice president of Central Statistical Bureau of Latvia, he has 14 years of experience in official statistics, particularly in implementing data processing solutions and infrastructure in organization to support whole statistical data lifecycle.

Has a significant experience in providing data management and processing solutions within the organization.

During his work the ICT infrastructure has been completely redesigned and implemented under his supervision and involvement. Has a significant experience gained in metadata driven, programming free environments system implementation.

Actively involved in ICT projects starting from identification of needs, requirements preparation up to implementation of the systems in production.

Mr Talers will be supporting the Leading IT expert in assessing the Business Software System in GCC-Stat.

14 years of experience in implementing data processing solutions and infrastructure supporting statistical data lifecycle

Staffing arrangements

Presentation of the team – Senior IT expert – Mr Mohith Shakir



Mr Mohith Shakir is an expert in Consulting, Design and Implementation on of IT Infrastructure at Larger Scale, Expert in Data Center Solutions and End User Computing Solutions.

Mr Shakir will coordinate the local IT team

- **Mr Arsalan** is an IT System expert having around 10 years of experience in IT Systems, expertise on Active Directory, Doman, VM Wares, Exchange, Server Technologies, Lync, Backup and Recovery
- **Mr Naresh Kumar** is a Network expert with around 8 years of experience in Network Infrastructure, Network Design, Firewalls Selection and Implementation, Routers, Switches, VPNs, Access Control, Firewall Migration, Network Architecture, Project Planning, Network Security Consulting, Juniper / Cisco

The GLOBCOM team will be responsible for the assessment of ICT Infrastructure and will propose the upgrade and further development of an Integrated End-to-End Statistical Solution

*16 years of experience in
IT Infrastructure Services,
ITIL Expert Certified*

Staffing arrangements

Presentation of the team – Statistics quality exp. – Dr J.Vila and Ms F.Carausu



Dr José Vila and **Ms Flora Carausu** are DevStat's internal experts possessing experience in quality assessment of statistics, providing suggestions and recommendations for improvements

Dr J.Vila has more than 20 years of experience in statistical methodology, monitoring and evaluation, quality assessment of statistical operations, processing of quantitative information, implementation of surveys, etc.



Ms F.Carausu has 7 years of experience working as an Expert in Statistical Quality Assessment, Evaluator, Expert in Local Statistics or Expert in Local Development. Working as an external expert for Eurostat, Ms Carausu has an excellent knowledge of European official statistics (incl. methodology, legal base, strategies and forward planning) and of the Quality Assurance Framework (QAF)

Staffing arrangements

Presentation of the team – Project manager – Ms Dovile Minkeviciute



More than 12 years of experience in the field of statistics, out of them 7,5 years of experience in management of international large scale projects

Ms Minkeviciute has more than 12 years of working experience in the field of statistics.

Has been working 4,5 years in National Statistical Office of Lithuania and since 7,5 years working in consultancy of international statistical projects.

Ms Minkeviciute will be responsible for mobilization of all experts, will monitor and coordinate the implementation of project activities, and together with the Project leader, Leading IT expert and Contract manager will be responsible for delivery of project reports / deliverables.

Management arrangements

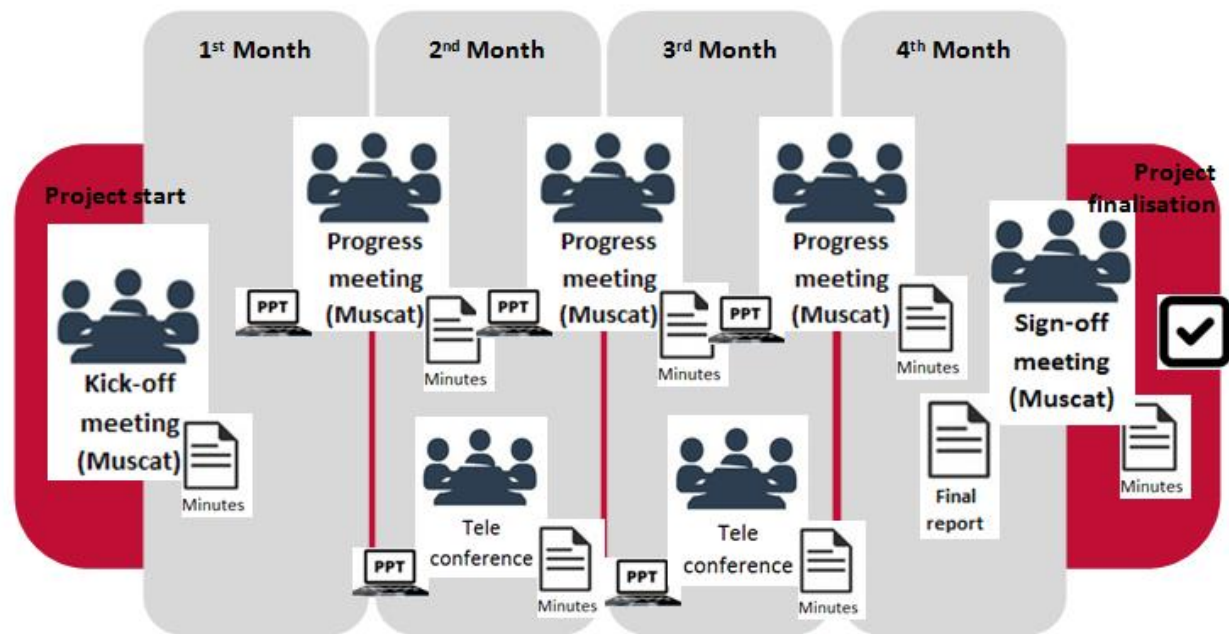
Meetings

Reporting



Management arrangements

Meetings



Management arrangements

Reporting

Milestone	Milestone content	Timing
Assessment report (Activity 1)	<ul style="list-style-type: none"> Assessment of current arrangements between GCC-Stat and six national statistical centers Comparison of arrangements with other international and supranational agencies Assessment against SWOT analysis covering statistical processes and ICT infrastructure 	Beginning of 4M
Report on evaluation of the end-to-end solutions (Activity 2)	<ul style="list-style-type: none"> Findings of the evaluation of end-to-end solutions which are available at national and international level Evaluation and analysis of several / relevant options 	
Requirements for Integrated end-to-end solution (Activity 3)	<ul style="list-style-type: none"> Proposal for statistical business processes and recommendations for the IT systems, software tools, ICT infrastructure components. Presentation of IT aspects Detailed architecture of the proposed solution Cost estimates 	
Gap analysis (Activity 4)	<ul style="list-style-type: none"> Analysis based on outcomes of the assessment of existing arrangements and expected future infrastructure Suggestions how to fill in those gaps Proposal of most feasible solution meeting GCC-Stat's needs 	
Final report (Activity 5)	<ul style="list-style-type: none"> Consolidated report on all findings, outcomes and proposals mentioned in previous reports Recommendations for future and next steps 	



Questions
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Answers
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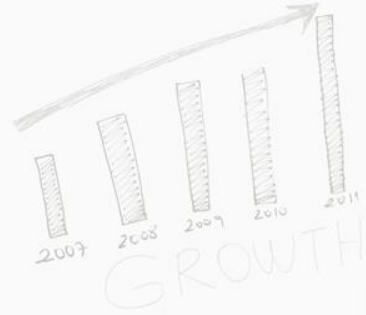
TIME PLAN

BUSINESS STRATEGY → INNOVATION GROWTH

BUSINESS PLAN??

ORGANIZATION

- HUMAN RESOURCES
- BUSINESS ETIQUETTE
- CROSS CULTURAL MANAGEMENT
- LEADERSHIP
- PRESENTATION
- COMMUNICATION
- TIME MANAGEMENT
- CUSTOMER SERVICE
- SALE
- BUSINESS ORGANISATION
- CREATIVITY
- FINANCE PLANNING
- OTHER TOPICS



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RESPON

$$\frac{+M2 + M3}{N2 + N3} = \%4$$

SALE

OUR MISSION
OUR VISION
OUR TARGETS
TEAMWORK

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HO

- IDEA
- PLAN
- BUSINESS
- PRODUCT
- STRATEGY
- RESULT

YES
OR



VALUE

B2B



Thank you for your attention

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