AUSTRALIAN COMPUTER SOCIETY

RECOGNITION OF PRIOR LEARNING APPLICATION

This document is required to be completed for all Recognition of Prior Learning (RPL) Application types and must be attached to the online application form under the RPL tab in PDF format.

In this document there are two sections that all applicants must complete –

- The Key Areas of Knowledge – Section 1
- The Project Report Forms – Section 2

RPL applications are for those applicants who do **not** hold a recognised tertiary ICT qualification and have a minimum of 6 years of closely related experience. Please refer to the Summary of Criteria for further information.

This document provides the opportunity for an applicant to demonstrate the depth and breadth of knowledge learnt throughout their experience.

Applicant Name	XXXXXXXXXXX
Application ID (if known)	
Applicant Date of Birth	

SECTION 1 – KEY AREAS OF KNOWLEDGE

INFORMATION ABOUT THE AREAS OF KNOWLEDGE

Please read the following document to assist you in completing the Key Areas of Knowledge - Key Areas of Knowledge

Applicants will need to detail the relationship between the selected Areas of Knowledge and what they have learnt from their experience and qualifications. This section of the RPL needs to be specific as to how and where the applicant has learnt the knowledge.

You will only need to tick and complete the areas of knowledge you believe you have acquired throughout your experience

Please Note: *None of the areas are mandatory.*

This is one of the most important parts of the assessment and therefore it should be comprehensive in its content and clarity.

It is important that you:

- **Identify what Areas of Knowledge you have learned by selecting the appropriate box.**
- **Explain how you acquired and applied the knowledge in your working environment in the expandable typing area.**

Key Areas of knowledge

ICT PROBLEM SOLVING (PS) ☒

How have you acquired and applied this knowledge in your working environment?

Problem solving also known as Issue Resolution is one of my key strengths. I was able to put this to good use while remediating red projects for clients such as Alliance Bank Berhad & EON Bank (during my tenure in SAS), and also in Bank Negara (during my tenure in HPI). During the course of any project execution, problems are always bound to happen at a Project, People, Processes or at a Technology level. Problem solving involves a lot of soft skills such as Listening, Collaborating, Teamwork and Communication. The following provides the steps, which I follow to handle and resolve problems.

1. When a problem arises or is escalated to me, I make an effort to listen to the details, even if they are technical in nature. So getting a good understanding on the nature and background of the problem is essential, since this enables me to define the problem statement.
2. Once I have an idea of the problem statement, I also get clarity on the involved parties, who could potentially help to address this problem. This could mean getting the relevant parties into a brain-storming session to identify the root cause, and also to generate options to address the problem. Options discussed with me are classified into 2 phases - Short-term and Long-term. In order to immediately address the situation so that there is minimal impact to business, short-term resolutions are proposed. In order to permanently fix the problem, long-term options are also discussed.
3. Once the short-term and long-term options are discussed, a matrix is created to weigh the pros and cons of each, along with analysing the business impacts, timeline and cost implications. These are drafted in detail using MS-Excel. A summary of this is extracted into a PowerPoint presentation, along with the proposed solution, and is presented to the Senior Management for buy-in. Depending on the complexity and impact of the problem; this may lead to multiple engagement sessions with the various stakeholders, until a decision has been made.
4. Once the solution has been finalized, we formalize this via a Change Request, and I proceed to get the team to start working on the details of executing this, in terms of outlining the actions, responsible owners and completion dates for each (Short-term & Long-term). This is then shared with the relevant stakeholders and progress updates are communicated to them on a regular basis.

Most of the time, due to the time-constraint, we prioritize to work on the short-term options first, while the discussions for the long-term solutions run in parallel.

PROFESSIONAL KNOWLEDGE (PK) ☒

- Ethics
- Professionalism
- Teamwork Concepts and Issues
- Interpersonal Communication
- Societal Issues/Legal Issues/Privacy
- History and Status of Discipline.

How have you acquired and applied this knowledge in your working environment?

Having worked in many MNC companies, my belief is that the level of professionalism that should be maintained should be the same. Being authentic and transparent in my dealings is my principle, since that creates the level of trust amongst the team. And with trust, motivation and productivity increases. This leads to a performing team that can deliver the expected outcomes. I have managed diverse teams across the globe, and this has given me the knowledge to understand and adapt to each other's culture and beliefs. The teams sometimes comprise of staff who are older than me, or who have worked in the

company longer than me. For e.g.: in Shell, I manage teams of Project Managers across the globe, and most of them have been working in Shell for a very long period of time. When I took on this team, I had to spend a lot of time understanding their background, and to build a relationship of trust and professionalism. I had to demonstrate that I have the required knowledge and experience to be able to lead them. Our communication channels are mostly virtual in nature, and this adds to the challenge of not being able to see the body language or the facial expressions. This requires me to always be cautious of my tone of voice and also the way I speak. Within a matter of 1 month, I was able to get on-boarded with my new team in Shell, and we aligned on a set of objectives, so that we all are clear on the expected outcomes. Building relationships also means that I get to understand their strengths and weaknesses, so that I'm able to adapt and compliments their weakness. I also had my stakeholders and Line Manager outside of my country, which increased the number of interactions I needed to have with all of them to build and sustain relationships. By nature, I prefer face to face interactions, since it greatly helps to speed up our tasks, without having to face time zone challenges, which could slow down execution sometimes. But my experience in Shell has taught me immensely to manage virtual teams, and deliver in a virtual world.

In a Project world, 99% of my job is to communicate effectively at all levels within the organization. My inter-personal skills vary at different levels. Before I communicate, I make sure that I have all the facts and information at hand prior, since I need to use that to influence my stakeholders to my way of thinking. It's not more on what I present, but more on how I present the content. This requires good skills in PowerPoint, to be able to prepare the key messages, and also requires a lot of confidence to answer any type of questions. But this gets easy if we have maintained a good relationship and trust factor. Having the power to influence with the right data helps us to get the buy-in for any type of proposal or suggestions that we make.

Teamwork is all about getting the team to work towards a common goal. During my tenure as a Portfolio Manager or as a Project Director, I have ensured that my teams have no fear in speaking their minds, they collaborate well with the others in the organization, and they also share their ideas, so that the rest can leverage on the knowledge and experience of the others. We have regular Team meetings, where everybody dials in from their respective location and we share updates, and try and help the other team members, if they have an issue at hand. I do have regular 1-2-1 meetings with each of my team member to discuss their personal development goals and career aspirations.

On Ethics specifically, back in Shell and all the other organizations that I have worked for, being able to follow the code of ethics is essential in our nature of work. For e.g. Ethics on bribes and accepting gifts, ethics on dealing with confidential information, ethics on being compliant are very commonly seen and practiced. Also as part of PMI, I need to abide by their Project Management code of ethics.

TECHNOLOGY RESOURCES (TR) ☒

- Hardware and Software Fundamentals
- Data and Information Management
- Networking

How have you acquired and applied this knowledge in your working environment?

Hardware and Software Fundamentals

Having started my IT career way back in 1992, I started off by learning the basics in Hardware and Software technologies. I had some knowledge on assembling PCs and Servers, and connecting them to a network via a hub. On the Software side, I have programming knowledge in COBOL 85, Visual Basic, ASP, Lotus Notes, HTML and VBScript. Besides the programming languages, I have worked on tools like Crystal Reports (Reporting tool), Install Shield Express (to create installation executables), SharePoint (Collaboration tool), MS-Office, MS-Project (for Project Management) and Visio to assist in my career to support various roles such as a Consultant, Programmer and Project Manager. I have also worked on

Electronic Data Management systems like Alchemy, Customer Relationship Management systems such as SalesLogix & ACT 2000, Data Warehousing & Analytical systems such as SAS tools.

Data and Information Management
Back in Ricoh which was an office automation company, managing information and data was the biggest challenge. We bought a tool called Alchemy which was a product of Captaris, to manage data in-house. I managed this project for Ricoh, where we worked on an initiative to scan & index all the documents within Ricoh and then perform OCR (Optical Character recognition) for easier search and retrieval. It also had an in-built workflow tool for approval processes. This exercise enabled Ricoh to save up on the physical storage space and also significantly reduced the time to retrieve information from days to seconds. This saved Ricoh lot of money. I was also in-charge of deploying this to our clients, because of the success story in Ricoh.

During my tenure in SAS, we dealt with managing end-to-end Enterprise data for our customers, using SAS tools. We targeted mainly the FSI (Financial Services Industry), since Banks had the biggest challenge in managing huge volumes of data. We start off with building the Data Warehouse, which extracts data from the various data sources. Rules are written in the Warehouse to manage different types of data. This data then flows into the various reporting and analytical tools for the end-users. These tools assist in obtaining financial information, consumer data, predictive modelling along with marketing campaign initiatives.

Currently in Shell, we manage documents in SharePoint which is centralized. This tool helps us to collaborate with the rest of the organization, along with allowing real-time updates, with high availability.

Networking
In the role of a Portfolio Manager in Shell, I'm in-charge of implementing Enterprise infrastructure projects for the various Operating Units (OUs) within Shell. As part of the infrastructure project delivery we also handle networking aspects such as ensuring the infra is ready prior to the start of migrations, or consolidating and optimizing the existing network to reduce costs and so on. I'm familiar with the concepts in networking such as LAN, WAN and DMZ (De-militarized zone), Network devices such as Routers & Hubs, Data transmission protocols such as TCP IP, FTP and HTTP, and Network Security concepts such as External threats and Phishing.

TECHNOLOGY BUILDING (TB) ☒

- Programming
- Human-Computer Interaction
- Systems Development
- Systems Acquisition.
-

How have you acquired and applied this knowledge in your working environment?
I started off my career as a Programmer way back in 1992, in languages such as COBOL 85, C++ and Clipper. I later moved into GUI programming such as Lotus Notes, Visual Basic/Visual Studio, ASP and VBscript. As part of programming, I carried out Business requirements gathering, did the Systems Design, Development, Testing (SIT & UAT), and finally cut-over to Production. I also conducted Admin and User trainings as part of this lifecycle. I started off by building a retail system in COBOL 85, during my working tenure in India. Subsequent to that, I developed several systems using Visual Basic, ASP and VBscript programming. I also developed an ODBC application in Lotus Notes to connect the various Telekom systems into a centralized location to exchange data. In Maxis, I developed a Sales Commission system to calculate the Bonuses and Commissions for Sales people. In Profitera, I customized the Saleslogix tool, which used VBscript as the programming tool, to design and implement various systems for clients such as Communications & Multimedia Commission (CMC), Tourism Malaysia, HELP Institute,

Maybank Labuan and KPMG, based on their requirements. I have also customized SharePoint for Ricoh Malaysia, to be used as a collaboration tool. I have attended formal Lotus Notes Training, MS SharePoint Training and I'm also certified in Saleslogix.

As part of Systems Development, I have managed teams ranging between 5-10 programmers and technical consultants back in Profitera. I used to be involved in all stages of System development starting from the RFP (Request for Proposal) stage onwards. I will then work with the team on the Proposal that needs to be submitted to the Client. Once shortlisted, I conduct demos on the Prototype, which I design with the team. Once the deal is secured, I take on the lead of a Project Manager, and do a detailed Business Requirements gathering, System Design, Development, System Integration Test, User Acceptance Test, Training and finally the Cut-over and Go-live. Some of the deliverables we produce are the Project Management Plan, Requirements document, Systems Design document, SIT & UAT Test plan and Test Scripts, Training Plan, User & Admin manual, Go-live checklist.

I have worked on different types of development scenarios:

a. One is Software development, where we develop the product from scratch using programming tools such as COBOL 85, Visual Basic and Lotus Notes.
b. Second is, we customize existing products which we acquire, such as Saleslogix, Alchemy and SAS analytical tools. Here there is programming involved, but we are unable to change the base product features.
c. Third is we configure "of-the-shelf" products such as products from Computer Associates (Networking systems, Backup solutions etc). Here there is no programming involved, but just configuration. Nevertheless, the project lifecycle with the various stages are still applicable to any type of software development projects.

Although my software development projects followed the traditional Waterfall methodology, I'm also familiar with LEAN, Agile, and SCRUM methodologies.

SERVICES MANAGEMENT (SM) ☒

- Service Management
- Security Management.

How have you acquired and applied this knowledge in your working environment?

Service Management

Service Management is a customer-focused approach to delivering information technology. In my tenure with Shell as the Enterprise Portfolio Manager, I was in-charge of delivering various types of infrastructure services, which are ready-to-use and is important to Business. It starts off with Business identifying the need for a service, which could probably help them cut costs or improve existing process. This is then presented to the Senior Management to gain approval of kick-starting this as a project. If this service needs to be deployed Enterprise-wide, then it would fall under my portfolio. Budgets are allocated for this project. In case there is no budget, I will need to look for offsets within my portfolio. The Project Manager (PM) from my team prepares the Project Charter, and I review this Charter before it gets sent to Project Approval Board (PAB) for approval. Once approved, the PM starts off with the various activities. In Shell, we follow the PDF (Project Delivery Framework) which is very similar to the ITIL (Information Technology Infrastructure Library) framework to deliver the services, since it provides best practices for aligning IT with business needs. We have a total of 6 stage gates viz. Project setup, Analyse & Define, Design, Develop, Deploy and Project Close out. There are deliverables that needs to be signed off at the end of each Stage gate. Once the project has been completed, it gets transitioned to the Operations team for future maintenance. If there are changes to scope, timelines or budgets a Change Request is raised and signed accordingly. I was in-charge of the end-to-end delivery of a service, including managing the Compliance aspects, Governance, Issues, Risks and Financials throughout the lifecycle. Sometimes, we deliver the services thru our ISP suppliers such as HP, AT&T and T-systems. In

this case, the supplier reports the status into my portfolio, and the ownership to ensure the successful delivery of the service still resides in my scope.
We also ventured into Managed services for some of our Infrastructure projects such as the Cloud services. In this case, we outsource the entire service to our supplier, and they build and manage the service for us.

Security Management
Back in Computer Associates (CA), I was a Project Manager in-charge of conducting a Vulnerability assessment for RHB Bank, along with my supplier TQT. This is where I managed to get a fair understanding of the various security concerns in the IT arena. The project focussed first on getting an understanding of the current security setup for IT systems, and then providing a more secure layer which will not be susceptible to external threats and other vulnerabilities. A series of tests were subsequently conducted to test the security features that were implemented.

In Shell, as a Portfolio Manager, I'm in-charge of implementing certain components of IRM (Information Risk Management) project, which is a set of strategic initiatives designed to improve information security by supporting the establishment of a more efficient, agile and secure IT environment. The IRM project has been structured to respond to the challenges of the ever changing threat landscape and regulatory compliance e.g. US Critical Infrastructure and is designed to move the IRM response to a more proactive posture, ensuring that information security is "built in" to our solutions and processes from the earliest phases of design. As a result of being responsible to deliver this, I have an understanding of IRM and its associated components.

OUTCOMES MANAGEMENT (OM) ☒

- IT Governance
- IT Project Management
- Change Management
- Security Policy.

How have you acquired and applied this knowledge in your working environment?
IT Governance
IT Governance is applicable for all IT projects, since it is required to ensure the effective and efficient use of IT in enabling the organization to achieve its goals. However, the IT Governance may vary from project to project depending on its complexity and risks involved. I have applied IT Governance processes for all projects when I was a PM, and also ensured that these processes were followed when I managed a team of PMs as a Portfolio Manager. It is all about putting in place a structure to enable business and IT alignment, and to stay on track to achieve the goals. These goals need to be specific, so that performance can be measured. During my tenure in Shell. The IT Governance was practiced very stringently. Once a project is approved, a Charter is prepared and it needs to go thru the Project Approval board to gain approval for execution. Every project has to follow Shell's PDF (Project Delivery Framework), which is a set of 20 controls and deliverables, across 6 stages. A Project Management Plan (PMP) is prepared, which outlines the business value, Deliverables and Risks. The stakeholders are identified, and a Steering Committee is formed once the relevant stakeholders have been identified. If the programme is complex and involves multiple streams, then there is a Steer Co at the programme level, and a Project Advisory Board at the project level. The frequencies of the Steer Co meetings are decided based on the complexity of the project/programme. Slides are prepared prior to this meeting and sent to the audience 2 days in advance. After the Steer Co meeting the Minutes are sent out within the next 24 hours. Reporting on a project is also essential. There are several reports that are prepared by my PMs and communicated to the various stakeholders. At a portfolio level, I send out the high-level updates for some of the key projects that are in the Top 20 list for Shell. Besides project reporting, IT compliance also plays a role in project Governance. In Shell, we have 5 compliance metrics which we measure our projects against:

a. PDF compliance – Must comply to the Project Delivery Framework
b. IRM – Should ensure we get sign-off from IRM for the infra components that we will be deploying.
c. Support & Transition (S&T) – Need to ensure that the support model is in place before we transition to Operations team
d. Above/below schedule
e. Above / Below Budget

A Dashboard showing all the above metrics is communicated at a portfolio level to the senior management on a Monthly basis. As a Portfolio Manager, I have to ensure we are 100% compliant on every metric, for all my projects.

During my tenure in HP as a Project Director, while working in the Bank Negara (BNM) project, we had to follow BNM's IT Governance framework. However, there were certain areas where we had to fulfil for HP's governance as well. But the Governance model is always agreed upfront prior to the start of any project, and this makes it easier to operate.

IT Project Management

I am a certified Project Management Professional (PMP) from PMI (Project Management Institute). I have been in the IT Project Management line, for the past 15 years. When I was with Profitera and Ricoh, I was managing a team of Technical and Sales Consultants, where Project Management played an integral part, whenever my Technical Consultants were implementing projects. I had to also manage customer relationships, in order to be able to cross-sell and up-sell.

In SAS, I was heading the Technology Department, which managed PMs. I coached and guided the PMs in their day-to-day work. I also setup the PMO (Project Management Office) for SAS, along with initiating the various processes for Reporting, Resourcing, Risk Management, Compliance and Financials. I remediated 2 red projects in SAS. One was for Alliance Bank and the other was for EON bank (now HSBC). I managed to bring the projects back on track, by convincing the customer via a Proposal of the deliverables along with a timeline. I earned the trust from the customer along with my team, and this led me to successfully deliver this project. As an outcome of this project, SAS won the Asian Banker award for best Data Analytics from Alliance Bank.

In HP, I played the role of a Project Director managing a team of 95+ members, including suppliers, to implement an Integrated Statistical system for Bank Negara. This involved managing the various complexities such as driving a scope that lacked clarity, insufficient resources and budgets, a huge consortium, varying technologies, and a demanding customer. This project was a 2 year project, and besides managing customer expectations, I had to also ensure the suppliers delivered their solutions. Risk Management, Change Management and IT Governance was at a more complex level.

In Shell, I manage a diverse team of global Project Managers at a Portfolio level. Every year, I have a budget of USD 35 – 40 mil, that is allocated to my portfolio to deliver infrastructure projects across the globe in Shell. I'm accountable for the Budgets, Projects and Resources within my portfolio. I'm measured against the outcomes of my projects, along with measuring the Financial health and also measuring compliance. As part of my role, I coach and mentor PMs to deliver, and I also train them on soft skills that are essential for a PM.

I have the experience of being a Project Manager in both Vendor and end-User environment over the past 15 years. I also have the experience of running Software development and Infrastructure projects. All projects must go thru an Initiation Phase, Planning Phase, Execution Phase, Control Phase and Close Phase. Managing the triple constraint (scope, budget and resources) is common in any project. Besides this, managing Issues, Risks, Change, Communications, Stakeholders and Governance are key areas that any Project Manager should manage. The methodologies used to implement can vary, but most of the organizations use PMI's framework. I also have knowledge in Agile, SCRUM and LEAN methodologies,

but I have hardly used any of them in my projects, since it also depends on the readiness of an organization to adopt such methodologies.

Change Management
Change Management applies to almost all types of projects, where there is a change expected within an organization. It is a structured process and set of tools for leading the people side of change to achieve a desired outcome, and it needs to start as early as the implementation of the project. In my role as a Project Manager, I have managed this process in different ways, based on the complexity of the project/change. If the organization is small and the change is minor, then the Change management can be done by educating the relevant users, and sending out the required communications to manage the change. However, in the case of large organizations, where the community is much bigger, the Change management process has to be managed well. It normally involves 3 steps as follows:

1. Prepare for Change – We define the change, identify champions, assess the organization's readiness for this change and arrive at the Change management plan, Communication Plan and also the Training plan.
2. Manage Change – Detailed actions are executed, along with sending out communications, conducting trainings and managing resistance.
3. Reinforce Change – We gather feedback via surveys, analyse the gaps and implement corrective actions.

Security Policy
I have a general awareness of how policies are created and executed. A security policy is a document that states in writing how a company plans to protect the company's physical and information technology (IT) assets. It is a living document, and needs to be updated on a regular basis, whenever there are changes to requirements. My knowledge as far as policies are concerned, is to understand the scope of the policy, the actions, the owners for the actions, the equipment that this policy applies to, the approving authority, and the consequences of not following the policy. During my tenure in Shell, we had various policies which we had to adopt. The Security policy in Shell, emphasized on how we should protect company's assets and the consequences of not doing so.

SECTION 2 - RPL PROJECT REPORTS

A project report is a coherent written description of a project or engagement that provides you with the opportunity to show how you perform as an IT (Computing) Professional, and enables assessors to understand and question your thought processes and decisions. Each report is to relate to a significant project or work episode undertaken by the applicant during his or her professional career.

The purpose of these reports is to enable applicants to demonstrate their command and implementation of the Areas of Knowledge claimed in your application.

Please note: Applicants are required to provide two project reports.

Of the two reports, one must pertain to project undertaken within the last three years, and the other for project within the last five years. Projects over two years long may be used for both reports under either of the following conditions:

- The project has clearly-defined work efforts which took place in parallel, each with their own solution development and design activities and their own deliverables.
- The project had clearly-defined phases that were executed in succession, each with its own solution development and design activities and deliverables. Note that a second project phase

that constructs and implements the solution developed by the first phase does not meet this requirement.

Depending on the nature of the applicant's role in the project, this would be expected to cover a selection of such factors as:

- System Analysis and Design and Software Engineering methodologies used;
- Contribution to the processes involved in the design and implementation of enterprise-wide computer systems;
- Programming languages, design paradigms and implementation procedures adopted;
- Database and/or file design and management techniques employed;
- Network topologies, including size, distribution and security facilities installed;
- Project Management and quality assurance techniques followed;
- Internet application design, including database interactivity and security measures implemented;
- ICT managerial activities, demonstrating the nature and extent of responsibilities

Project Summary:			
	Project Name	**Start Date**	**End Date**
Project 1	**Cost Performance Improvement (CPI) programme**	**01/14**	**12/14 (Multi-year project)**
Project 2	**Integrated Statistical System**	**10/11**	**10/12**

Instructions

The following pages provide a template for your reports.

When writing your reports please provide your own thoughts – do not just copy project documentation. Diagrams from the project documentation may be helpful, but the text should be in your own words.

Please use the first person in your discussion, so it is clear to the assessors what you did versus what others did – say "I did X" rather than "X was done".

Diagrams may be helpful, but please ensure that they are relevant, readable, and help the assessors to understand what you did on the project.

Focus on quality rather than quantity.

Below are a summary of sections you will need to complete for each project-

1. **Project Summary**
   - 1.1. Identification
   - 1.2. Duration
   - 1.3. Resources
   - 1.4. Personal Involvement
   - 1.5. Role and Responsibilities

2. **Business Opportunity or Problem**

2.1. Business Opportunity or Problem
2.2. Scope and Complexity
2.3. Relationship and Communications

3. Solution
3.1. Your Contribution
3.2. Key Decisions Made
3.3. Design Method Used
3.4. Design Tools Used
3.5. Major Deliverables

4. Results
4.1. Was your solution implemented
4.2. Overall Success – Client Satisfaction
4.3. Lesson Learned

Project 1: <project name>

1. Project Summary

1.1. Identification

Client's Company Name	Royal Dutch Shell
Trading Name/s	Trading Name/s
Company Size	94,000
Business Address	Head Quarters: Shell International Exploration and Production B.V. PO Box 162, 2501 AN The Hague, The Netherlands. In Malaysia: Shell Business Service Center Sdn Bhd (503619-D) Wisma Shell, 3450 Jalan Teknokrat 3, 63000 Cyberjaya, Selangor D.E., Malaysia
Contact Numbers	Tel: +31 70 377 9111 +603 8316 8888
Web Address	http://www.shell.com http://www.shell.com.my
Email Address	generalpublicenquiries-my@shell.com
Nature of project	Infrastructure – Cost Savings
Location of project	Global
Name of your employer	Royal Dutch Shell

1.2. Duration

Since this is a multi-year project, the dates below indicate only for year 2014. For 2015, this project is still in progress, and will continue into 2016.

	From	To
Total project duration	01/14	12/14
Your involvement	01/14	12/14

1.3. Resources

	Your Team	Client
Project team size	30+	No.
Size of team led by you	30+	No.

1.4. Personal Involvement

Please list the phases of the project in which you were personally involved

Since this is a multi-year project, the following phases happen every year. For the purposes of this document, I'll provide the Phase dates for 2014, since the project has been closed for that particular year. Some of these stages gates (SG) happen in parallel, since there are multiple work streams/projects under CPI, and some of the stage gates are combined. However, stage gate 2 & 4 are mandatory. Each year when a budget is allocated for this project, there is new scope that needs to be delivered for that particular year. It goes thru the following phases, and towards the year-end, this project needs to be closed out along with the Financials. This process repeats every year.

Start	Completion	Phase Description
01/14	02/14	Project Setup (SG1)
01/14	02/14	Analyse & Define (SG2)
02/14	02/14	Design (SG3)
02/14	12/14	Develop & Prepare to deploy (SG4)
02/14	12/14	Deploy & Stabilize (SG5)
12/14	12/14	Project Close out (SG6)

1.5. Describe your role(s) and responsibilities, including the leadership aspects.

I was the Portfolio Manager, and this project falls under my portfolio, since it's an Enterprise wide initiative. I was responsible:

1. To ensure the Cost Savings target of USD 44mil that was set for 2014 was achieved by the team.
2. To manage the budget of USD 13.8mil that was allocated for this programme.
3. To work with the team to identify opportunities in order to achieve the target.
4. To ensure resources are assigned to the various work streams and projects.
5. To ensure project compliance
6. To discuss and agree on a Governance model which caters for the overall programme, including the sub-projects.
7. To manage the various stakeholders
8. To be a focal point for any escalations.
9. Coaching and mentoring of some of the PMs who had under-performance issues.

2. Business Opportunity or Problem

2.1. Describe the business opportunity or problem(s) this project addressed and how it related to the (internal or external) client's needs.

The Cost Performance Initiative (CPI) was initiated, in view of achieving savings within the Upstream organization. The purpose of this programme was to restore and sustain cost competitive IT to the business by:

- Rationalizing the IT application portfolios & migrating to secure & efficient target operating environments
- Improving IT management practices and optimize the delivery of projects and services by IT partners
- Reducing IT services usage and check the growth of the IT estate and of the IT base costs

Based on the above, several projects and activities were identified in an effort to achieve the projected target savings. These projects will always take business continuity into account and as such safeguard the on-going operational businesses. Where possible the operational Business As Usual (BAU) way of working will be used to execute the project activities in order not to jeopardize network operations

For 2014, the Cost savings target that was set for Upstream was USD 44mil.

2.2. Describe the scope and complexity of the problem.

The IT spend in Upstream was growing at a very fast pace, which contributed to a significant increase in Base load costs. Due to this, there was very little room for new IT developments to deliver Business value. In order to overcome this situation, it was important to get the growth out of the Base costs, also known as "Bend the Cost curve". Hence Shell embarked upon the CPI in order to achieve a yearly savings target, by of:

- Moderate usage of IT services through effective Demand Policies & Software License Mgmt
- Eliminate waste & remove unnecessary duplication in the IT environment
- Stand-up Enterprise Tier 3 Data Centres and reduce the number of local Data Centres
- Improve ERP delivery by removing unnecessary non-production landscapes and introducing new services, e.g. data compression

The project scope was to reduce service usage and find cheaper alternative services. The key deliverable was to achieve 44M USD cost saving, which would be delivered through the various work streams as indicated below.

- Hosting and Storage related projects
- Managed Network Services, Contract management and Organizational cost reduction projects
- End-User computing related projects
- New initiatives

Some of the activities associated with the above work streams include Deskphone Removal, Mobile Phone cost reduction, Rightsizing WAN, Removing unused software, reduce personal storage to 5GB, Implement Laptop Pro, Implement Desktop Anywhere for Suppliers, Re-negotiate ISP and local contracts, Decommission zombies (remove servers and databases not in use), Housekeeping on hardware, user accounts & unused software, Reduce dedicated service engineers, Optimize the organization after UI/UA integration, remove non-production environments and move them to Cloud and Video conference reduction.

2.3. Describe your relationship and communications with client management / user management / end users.

One of the challenges with this programme was that the stakeholders were spread across the globe, and because of which F2F interactions was not possible. Hence a lot of time and effort had to be invested in building the relationship virtually. Regular 1-2-1 sessions were scheduled especially with the key stakeholders of this project, to understand if the project delivery was aligned with their expectations, and also to address any issues or concerns they may have on the project. A communication plan was established to document the type of communications required, along with agreeing on its frequency. Setting up the Governance model for this programme also helped to bring in discipline and structure. Regular reporting to all levels of management also helped in the communication of project updates, and to keep everybody aligned.

Also at a Project team level, I made considerable effort to ensure everybody was on boarded to deliver the same set of objectives and goals. We had regular team meetings, where we spoke of issues/concerns and areas of improvement.

3. Solution

3.1. Discuss your contribution to the solution, project or engagement including the rationale behind key choices. Please enumerate the alternatives you considered and your reasons for their rejection.

When the CPI programme was initially initiated, the scope was manageable, and hence we assigned an existing Project Manager (PM) to handle the entire programme. Without a clear understanding of the complexities within this programme, we did an initial plan and started the execution. However, we noticed along the way that the PM could not handle the complexities, since it required a more senior level of engagement, combined with knowledge and experience that are required to manoeuvre within the organization. I then suggested taking a step back, looking at the entire programme, assessing the various projects, and looking at the kind of resources that are required to achieve the target of USD 44mil. The first step was to replace the PM with a more senior Programme Manager, who has had experience managing senior stakeholders, and who has also managed complex programmes successfully. I then worked with the new Programme Manager to put a structure in place by dividing the programme into 4 main work streams viz. HNS, MNS, EUC and New Initiatives. We then decided to bring in work stream leads to manage those work streams, who then proceeded to hire their own PMs to manage the various activities under each work stream. Once we had a strong team, the next step was to define the Governance model at a programme level. Steer Co meetings were consolidated, Individual PAB meetings were scheduled, and the Programme Manager took on the task of managing this entire programme and reporting the status into my portfolio. Initially the finances for this programme were all over the place, and nobody had visibility into the numbers for each project. I worked with the PMO team to arrive at the budgets, forecasts and actuals for each project. Since this programme covered both UI and UA, the finances for both had to be brought together in a single overview. Once the Financial view was created, I handed this over to the Programme Manager to continue managing the numbers. It took around 4 months to get the initial setup done, but subsequently it was easier to manage because all the components were in one place. I also worked with the PMO team to ensure the programme and its individual projects were compliant from all angles.
Once the initial setup was done, I worked on a template to report the status of the entire programme and handed this template to my Programme Manager to send regular updates to the various stakeholders on a monthly basis. We defined escalation points, issue & Risk Registers, planned regular Team meetings, and had 1-2-1 sessions organised with the work stream leads to ensure that they were aligned and to also address any issues if they had.

3.2. Enumerate and describe the key decisions you made, and the reasons for making them as you did.

Key decisions that I made for the CPI programme are as follows:

1. Streamlining the programme – As the scope of the CPI increased, the expectations from stakeholders also increased. We started off with 5 activities, and then it suddenly increased to over 15 activities. All these had to be streamlined into a single programme so that it became manageable. Activities of similar nature were classified into a single work stream, and a work stream Lead was assigned. This way we had 4 different work streams viz. HNS, MNS, EUC and New Initiatives. The overall savings Target of USD 44mil was broken down to the various work streams/projects.
2. Building a strong team – Having a strong 1st & 2nd layer was very important for this programme. I had to replace the existing PM, since he lacked the required skillsets to manage complex programmes. I brought a strong senior Programme Manager. We then worked on the next layer, which was to ensure we had strong workstream Leads for each. These workstream leads were hired because of their prior knowledge and experience in running projects of similar nature. These workstream Leads were given the empowerment to hire PMs for individual projects, and to manage the delivery, so that they are able to achieve the set targets.
3. IT Governance – Initially the IT Governance was not given emphasis, but as the programme grew bigger in scope and complex in nature, I decided to work with my Programme Manager to define the Governance model at a programme and project level. We also wanted to ensure that we are aligned with Shell's Governance model, and also to remain compliant. The objective was to also reduce the number of meetings within the programme, so that the team is able to focus on delivery. Once we defined the governance at a programme level, we also defined it for each project, and we made the workstream leads to be accountable for their own governance and compliance metrics.
4. Dealing with under performance – The team grew as the programme grew. As more and more activities emerged, it became inevitable to have more PMs, but also to see how some of the projects could be consolidated and PMs could be optimized. As the team grew, we also had to deal with under performance. Since this was a very critical programme, that is targeted to bring substantial savings to the organization, each of the activity is critical to be delivered on time. We identified resources that lacked the capabilities to deliver, and coached them, and if there were no improvements, we had to ultimately replace them.
5. Standardizing Processes – We also aligned processes for Issues and escalations, and standardized some of the templates across the programme. Any decisions that had to be made were consulted with my Programme Manager and Workstream leads.

3.3. Describe the design method you used on this project and the rationale for its selection.

From a programme perspective, the following approaches were taken:

a. Classifying similar projects under manageable number of workstreams – for visibility and efficiency
b. Defining the Governance model – to gain better control of the various projects
c. Defining communication plan and reporting standards – To improve stakeholder management and engagement
d. Defining Risk, issue & escalation process – To pro-actively manage risks before they become issues, and also a standardised way of dealing with escalations for each project/workstream.
e. Funnelling Opportunities – This was to manage and control scope. As more and more opportunities were identified to achieve the Savings target of USD 44mil, it had to be managed in a controlled manner, so that it doesn't slip or get overlooked due to the volumes. Hence a process was established where all opportunities enter into a Funnel, where they are prioritized based on the criticality and the potential savings they could generate. These opportunities are then discussed during the Steer Co meeting, where a decision is made. Once the projects are approved, offsets will need to be identified to fund these new projects, along with resources to deliver them.
f. Quick Wins – Since the Savings target was USD 44mil for 2014, we embarked on an approach to identify quick wins or "low-hanging fruits". This brought in the savings immediately, while the team worked in parallel on the other complex opportunities.

From an execution perspective, the projects under CPI are all about rationalizing IT applications, improving IT processes and reducing the growth in the IT estate. The design for each project will vary depending on the expected outcomes. For eg: In the Deskphone removal project, we identify Deskphone (hardware) that can be removed at a global level, and replacing them with soft phones. We also identify the potential savings that this will generate. However we do create policies if there are exceptions. Similarly in the Mobile phone Cost reduction project, we identify the top spenders in the organization, and based on the nature of their job, we take away the devices. Mobile policies are also created, so that there is alignment within the entire organization.

3.4. List the design tools you selected for use on this project and discuss the rationale for their selection.

From a Programme perspective, we use:

a. SharePoint to collaborate and to store documents related to every project. We also use SharePoint to produce a Dashboard of the CPI status, with regards to the savings that has been achieved to date.
b. Project Reporting Tool (PRT), to report the progress of the project. We have PRT IDs for each project, but they are all tied back to the overarching programme.
c. Cost Tracking Sheet (CTS), to track the Financials for the various projects such as Budgets, Actuals, Forecast and Commitments.
d. MyRequest tool to request for Hardware or Software
e. ARIES system to raise requests for our suppliers to execute some of our projects.
f. PowerPoint for reporting, and also to present in the Steer Co & PAB meetings.
g. MS-Word to prepare the Project Charters for each project.
h. MS-Excel to prepare the Project Management Plan (PMP). Individual PMs use MS-Excel to prepare detailed project plans.
i. MS-Project is sued sometimes to prepare the project plan and to identify the critical path.
j. MS-Outlook is commonly used for email tracking and calendaring.
k. Tools such as Lync are widely used for virtual meetings, since this is a global project and the team including the stakeholders are in various time zones.

3.5. *List the major deliverables of the project that you were responsible for or contributed to, and summarize the reason for their inclusion.*

The CPI programme comprised of many projects, and UI was accountable for the successful delivery of these projects, including the deliverables that were expected from this programme which were:

1. To deliver a cost savings target of USD 44mil in 2014 – As part of the cost cutting exercise, targets were set on a yearly basis. This will help to improve the IT landscape in the organization, so that wastes and redundancies are eliminated along with optimizing and streamlining some of the processes.
2. To provide monthly reporting and Dashboard – To keep all our stakeholders informed on the progress of this programme on a regular basis.
3. To arrive at new initiatives or opportunities to address gaps if any – There could be situations where a particular activity is not able to generate the anticipated cost savings, which leaves a gap to be addressed. Hence it was crucial to always look out for new initiatives to fill the gaps, as and when they arise.

4. Results

4.1. *Was your solution implemented? If so, describe the role, if any, you had in the implementation. If not explain why not.*

Yes the solution was fully implemented, based on the approach that I had initially designed to structure this programme and bring in capable resources to manage the various activities. I had to ensure that the resources stayed motivated to deliver the targets, to ensure stakeholders were well managed, issues were addressed, escalations were handled well, communications were regular, risks were handled proactively, projects remained compliant, ensure financials were handled and reported on a regular basis. Manage the allocated budgets so that we do not over-utilize or under-utilize, manage scope creep, manage and optimise resources and, standardize reporting and processes and ensure the governance model is adhered to.
As the portfolio manager I was accountable to deliver the expected outcomes which also include achieving the savings target of USD 44mil. By Dec-2014, we over achieved the target and ended up achieving a savings of USD 47.6mil.

4.2. *Assess the overall success or failure of the project. Comment on client satisfaction, attainment of objectives, and ultimate versus proposed cost and schedule.*

The project was a success because we over-achieved the savings target by 3mil. This resulted in gaining the trust of our senior stakeholders. As a result of this, the target for 2015 was set even higher at USD 51mil, mainly due to the fact that the stakeholders had confidence that our team will be able to achieve it, because of the various collaborative approaches we undertook to deliver the targets. They also had the confidence in the capabilities and skillsets of our team. The relationship with the stakeholders was well established and hence it became easier for my team to execute the tasks. The objectives and scope that was outlined for 2014 project was also achieved. All the individual projects under the programme were delivered on time and within budget. Even if we exceeded the budget for one project, we always found the offset from another project. So from a financial perspective as well, the project looked healthy.

4.3. Lessons Learned

In retrospect, what you might have done differently on this project and what lessons did you learn?

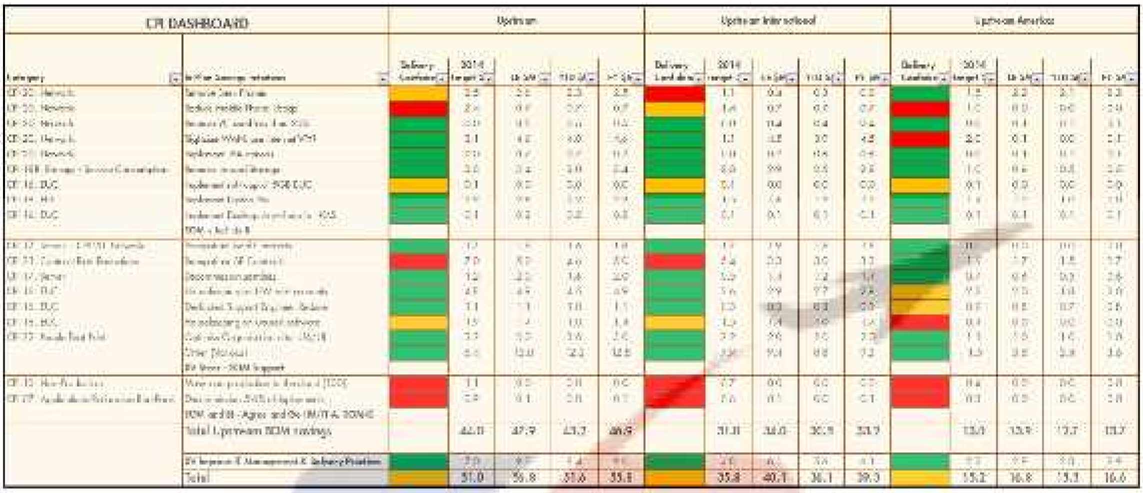
Some of the lessons learnt are:

1. Not to underestimate the scope of any project. The CPI, although looked manageable at the beginning became extremely complicated, as we received more clarity
2. Put a process in place right from the beginning to manage scope, so that it does not get out of hand. The earlier the better.
3. Ensure the resources that are required, have the necessary skillsets and capability to perform the tasks.
4. Deal with under-performance quicker, so that it does not impact the deliverables of the project
5. Spending more time in the initial stages of the project, to plan and setup a project, pays off in the long run.
6. Investing time to build relationships with stakeholders helps to expedite the execution of tasks and also to address issues.

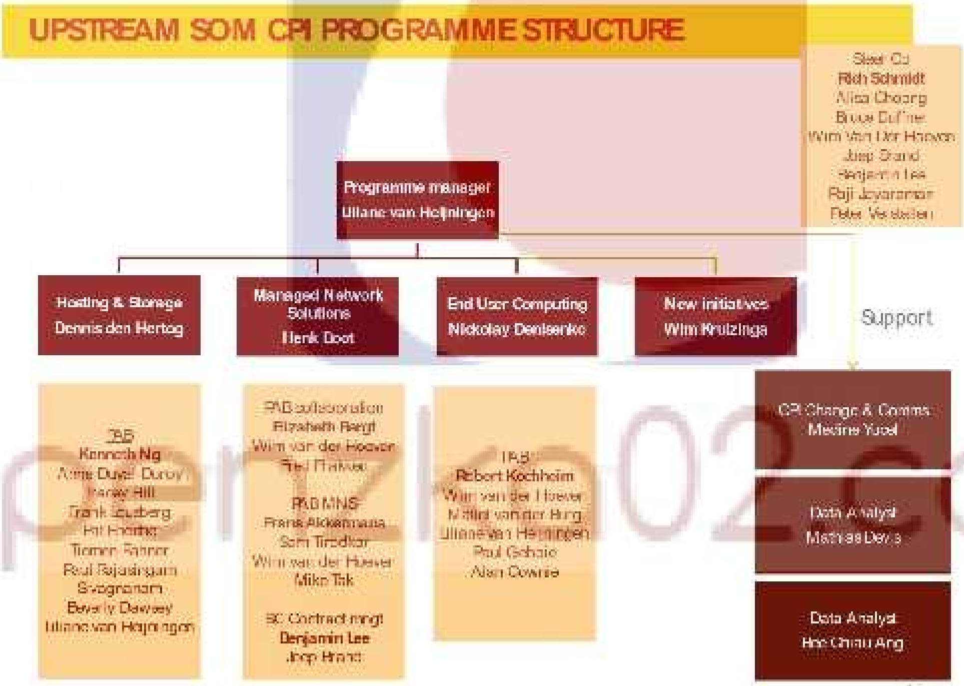
CPI Budget Overview for 2014

Category	LOB	Activity	Cost to obtain
CPI 03. Data quality	UI	Data Quality Activities	150,000
CPI 03. Data quality	UA	Data Quality Activities	125,000
CPI 14. Applications Consolidation	UA	Decommission 5-6% of deployments	-
CPI 10. Non-Production	UA	Remove non production or move to cloud	600,000
CPI 10. Non-Production	UI	Remove non production or move to cloud	300,000
CPI 14. Applications Consolidation	UI	Decommission 5-6% of deployments	-
CPI 16. EUC	UA	Housekeeping on unused software	143,340
CPI 16. EUC	UI	Housekeeping on unused software	143,340
CPI 16. EUC	UA	Implement Desktop Anywhere for RAS	17,519
CPI 16. EUC	UI	Implement Desktop Anywhere for RAS	17,519
CPI 16. EUC	UI	Implement laptop Pro	29,359
CPI 16. EUC	UA	Implement laptop Pro	29,359
CPI 16. EUC	UA	Implementation of soft quota management for EUC user storage	11,680
CPI 16. EUC	UI	Implementation of soft quota management for EUC user storage	11,680
CPI 16. EUC	UI	Reduce dedicated service engineers	17,519
CPI 16. EUC	UA	Reduce dedicated service engineers	17,519
CPI 16. EUC	UI	Housekeeping of hardware & accounts	11,680
CPI 16. EUC	UA	Housekeeping of hardware & accounts	11,680
CPI 17. Server	UA	Decommission zombies	125,000
CPI 17. Server	UI	Decommission zombies	150,000
CPI 17. Server	UI	Renegotiate local Hosting Contracts	50,000
CPI 17. Server	UI	Migrate Oracle to Exadata	500,000
CPI 17. Server	UA	Migrate Oracle to Exadata	350,000
CPI 18B. Storage - Service Consumption	UA	Remove unused Storage	325,000
CPI 18B. Storage - Service Consumption	UI	Remove unused Storage	325,000
CPI 20. Network	UA	Mobile Phone Challenge	500,000
CPI 20. Network	UI	Mobile Phone Challenge	500,000
CPI 20. Network	UA	Remove desk phones	2,000,000
CPI 20. Network	UI	Remove desk phones	500,000
CPI 20. Network	UA	Rightsize WAN, use Internet VPN	165,000
CPI 20. Network	UI	Rightsize WAN, use Internet VPN	165,000
CPI 20. Network	UI	Renegotiate local MNS Contracts	90,000
CPI 20. Network	UI	Implement TPA Options	-
CPI 20. Network	UA	Implement TPA Options	-
CPI 20. Network	UI	Remove 75% of LAN ports by 2017	-
CPI 20. Network	UA	Remove 75% of LAN ports by 2017	-
CPI 20. Network	UI	Remove VC used less than 20%	500,000
CPI 20. Network	UA	Remove VC used less than 20%	500,000
CPI 21. Contract Rate Reductions	UA	Renegotiate ATT ISP Contract	-
CPI 21. Contract Rate Reductions	UI	Renegotiate ATT ISP Contract	-
CPI 21. Contract Rate Reductions	UI	Renegotiate T-Systems ISP Contract	-
CPI 21. Contract Rate Reductions	UA	Renegotiate T-Systems ISP Contract	-
CPI 22. People Foot Print	UA	Optimise Organisation after UA/UI	10,000
CPI 22. People Foot Print	UI	Optimise Organisation after UA/UI	-
CPI 15. ERP Operations	UI	CPI 15. ERP Operations	
CPI 16. EUC	UA	Renegotiate Microsoft enterprise agreement	-
CPI 16. EUC	UI	Renegotiate Microsoft enterprise agreement	-
CPI 16. EUC	UI	Ask IT Cost Reduction	-
CPI 16. EUC	UA	Ask IT Cost Reduction	-
[redacted]	UI	[redacted]	3,000,000
[redacted]	UA	[redacted]	1,800,000

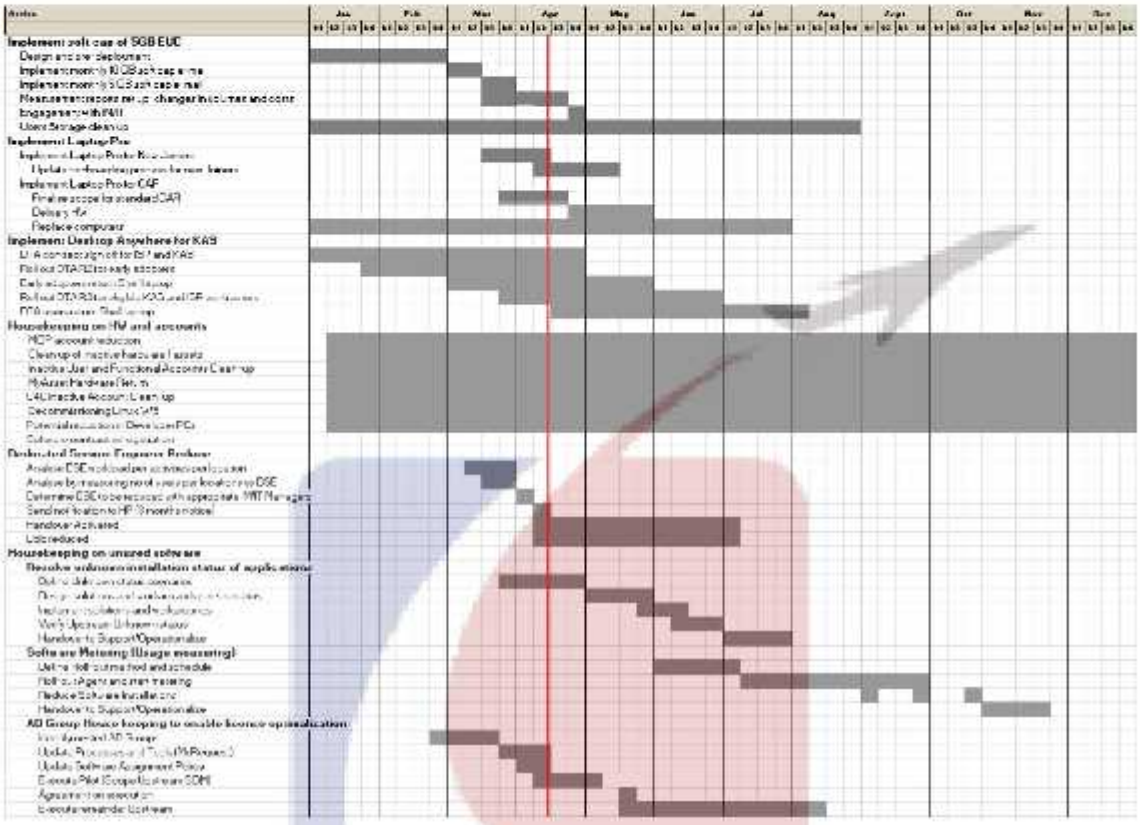
Sample of CPI Monthly Dashboard



CPI Program Structure



CPI Project Plan



Project 2: <project name>

1. Project Summary

1.1. Identification

Client's Company Name	Bank Negara Malaysia
Trading Name/s Company Size	Trading Name/s 1001-5000 employees
Business Address	Jalan Dato' Onn P.O. Box 10922 50929 Kuala Lumpur, Malaysia
Contact Numbers	Tel: +603-2698-8044 / +603-2698 9044 / +603-9179 2888
Web Address	www.bnm.gov.my
Email Address	bnmtelelink@ bnm.gov.my
Nature of project	Integrated Statistical System
Location of project	BNM Head Quarters, Kuala Lumpur, Malaysia
Name of your employer	Hewlett-Packard

1.2. Duration

The overall ISS project was divided into 3 phases, spread across a duration of 2.5 years. However, due to the complexities of this project, HP decided to implement only Phase 1 and terminate the contract for the subsequent phases. The duration below indicates only Phase 1 of this project.

	From	To
Total project duration	04/11	10/12
Your involvement	10/11	10/12

1.3. Resources

	Your Team	Client
Project team size	100 (including suppliers)	20
Size of team led by you	90 (including suppliers)	5

1.4. Personal Involvement

Please list the phases of the project in which you were personally involved

The timelines below denote only the Phase 1 of this project.

Start	Completion	Phase Description
10/11	11/11	Design Phase
11/11	04/12	Build/Development
05/12	06/12	Integration Test
06/12	07/12	User Acceptance Test (UAT)
06/12	07/12	Cut-over

Start	Completion	Phase Description
07/12	10/12	Post cut-over

1.5. Describe your role(s) and responsibilities, including the leadership aspects.

I played the role of HP Project Director to ensure the successful implementation of Integrated Statistical System for Bank Negara Malaysia (BNM). Some of my responsibilities were:

a. To act as the main liaison between Client (BNM), HP and Partners/Suppliers
b. To ensure delivery of the Phase1 deliverables of the integrated ISS solution, by the contractually committed date of 2nd July 2012.
c. To manage the various consortium partners (offsite & onsite), to ensure on-time delivery of their deliverables, and with quality
d. To manage all aspects of schedule, scope, budget, financials, schedules and resources, throughout this project.
e. To lead the PMO office to ensure delivery of status reporting, managing risks and issues on this project
f. To ensure the resource gaps, technology gaps and integration gaps were addressed with the relevant personnel
g. To take lead in the Steering Committee meetings to present project status and updates
h. To manage Client & Stakeholder expectations throughout the project
i. To motivate, coach and increase the morale of the team members, in order to reduce attrition

2. Business Opportunity or Problem

2.1. Describe the business opportunity or problem(s) this project addressed and how it related to the (internal or external) client's needs.

BNM had quite a number of disparate statistical collection, analytical and dissemination systems. They had more than 10 systems working in silos to collect data and disseminate reports to users. BNM appointed Hewlett-Packard (HP), as the System Integrator to implement an end-to-end Integrated Statistical System (ISS), comprising of :

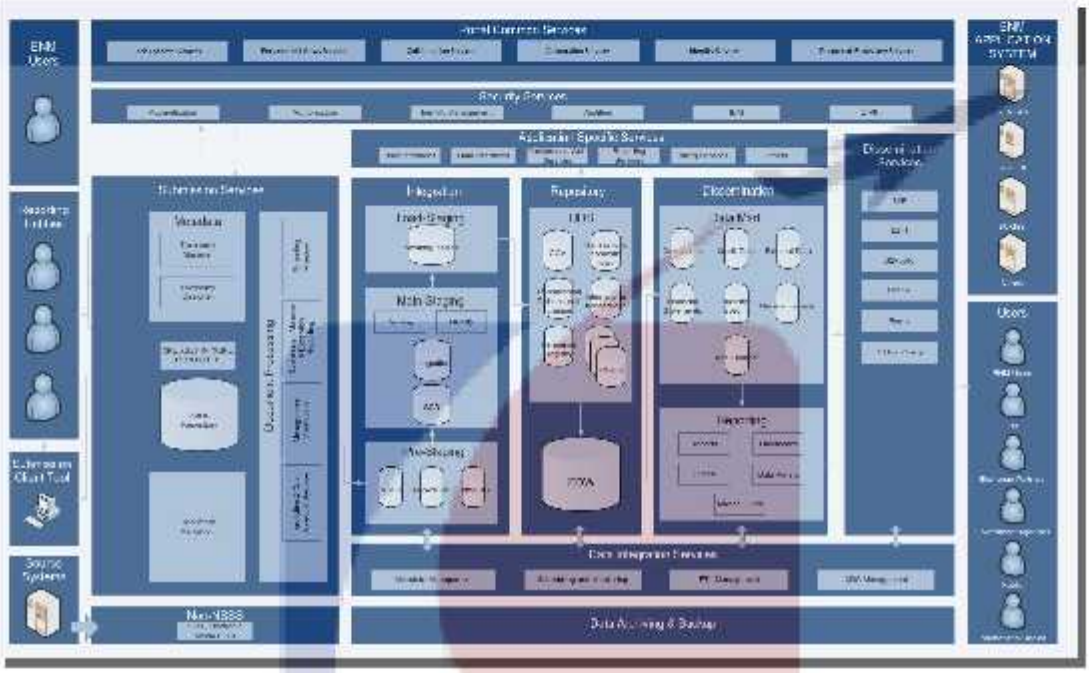
a. A standard submission platform for Reporting Entities (REs) to submit all types of data to BNM;
b. A centralised data repository in BNM to store the data submitted by REs, including the historical data that will be migrated from BNM existing systems into ISS;
c. A common Statistical Information Portal (SIP) to facilitate reporting and data access by all internal and external stakeholders.
d. All financial and economic statistical data to be streamlined and integrated in ISS to provide consistent and credible business information across BNM and external stakeholders, for regulatory compliance, monetary and financial analysis, research and decision making and enhance operational efficiency

The ISS project was setup to achieve the following objectives:

a. Provide easy and fast access to timely, credible and relevant data for financial, monetary and economic surveillance, analysis, decision making and policy formulation;
b. Improve efficiency in data sourcing, processing, delivery and visibility; and
c. Deliver consistent data, based on a standardised description and definition, to all users within BNM and external stakeholders; particularly FIs (Financial Institutions), Government agencies and international communities.

2.2. Describe the scope and complexity of the problem.

The overall objective of the ISS project was to provide a centralised system to facilitate the collection of data from REs (Reporting entities), store the data through a model driven architecture, and implement a statistical dissemination portal that will cater to the needs of all internal and external stakeholders. The following solution overview depicts the end-to-end overview of the entire solution that was designed to meet BNM's requirements.



The scope comprised of the following:

1. Data Submission – To provide a Statistical Information Portal for the Reporting entities (RE) to login, where their logon details will be identified and authenticated thru security services. Once the login is authenticated and authorized, REs will get to access their own dedicated portal page. There are 3 main submission modes in ISS, which are Online Submission, Offline Submission and Batch Submission.
2. Data Integration - Once data are submitted via the submission modes, these data will be extracted into the data integration layer. Data integration layer is segmented into 3 segments known as pre-staging, main staging and load staging. Pre-staging function as a landing stage where all raw data inclusive NSSS, Non-NSSS and any other flat files types are extracted from data source layer and stored in its original format. Then, data are extracted into main staging where data pre-formatted for consistency and data harmony, filtered, merged, profiled, cleansed and performed standard transformation. Load Staging is the final staging where data that are extracted from main staging are optimized to ensure high performance when executing transform and load into data repository layers. Data are extracted and consolidated in Operational Data Store (ODS) and Enterprise Data Warehouse (EDW). ODS is a database designed to contained low-level or atomic data (transactional data). Meanwhile EDW store aggregated, summarize and historical data. ETL jobs are then performed on EDW to form data marts based on business specific subject orientation in the data dissemination layer. Each data mart created supports conformed dimensions and can be independent of each other but will always be a subset or derived information from the data repository layer.
3. Data Dissemination - Ultimately, data marts information will be extracted, mapped and structure into business tactical and decision making analysis using reporting services like data mining, dashboard, event driven reports and ad-hoc query. The entire data integration layer, data repository layer, data dissemination layer and dissemination portal layer sits on top of a unified metadata framework where metadata is stored and managed centrally.

Some of the most common challenges in implementing a system of such complexity and nature is:

1. Managing a huge consortium of Partners/Suppliers with varied interests
2. Each Supplier providing different technologies. Integrating them from an end-to-end perspective generates lots of technical and compliance issues.
3. Suppliers shaping requirements against their packages rather than against client requirements
4. Requires immense Technical expertise and support for each product
5. Keeping the team motivated to deliver the outcomes over the entire duration of the project.

2.3. Describe your relationship and communications with client management / user management / end users.

The stakeholder community was very large in this project, since it consisted of both internal and external parties. However, my interactions were mainly with BNM's internal stakeholders, stakeholders from IIP, the Consortium of partners, and my own project team. I joined the project during the Design phases of Phase 1. By then the project was already in red, and I was hired to remediate the project and bring it back on track. In addition, the relationship with BNM had soured, and I had to re-build the trust. The Project Team was also very low in morale, due to the increased attrition rate. When I took over the project, I had many meetings with various individuals in BNM, along with the Consortium and my own project team, to build the relationship. Towards the end of 1 month, the client believed in my approach and was eager to support me in delivering the project. We also had to bring in expertise from other countries, since we lacked the knowledge in Malaysia. I had to also ensure they were aligned with the objectives and we delivered as a single team. By including key people from BNM to work alongside our team on various modules, they became very supportive. Due to the tight deadlines, we had to spend almost 18-20 hours every day, including weekends and public holidays for almost 9 months. BNM supported us by providing their resources to assist us whenever required.

3. Solution

3.1. Discuss your contribution to the solution, project or engagement including the rationale behind key choices. Please enumerate the alternatives you considered and your reasons for their rejection.

When I took over the project during the Design stages, the project was flagged as red, due to the numerous issues such as:

1. HP had sold this project to BNM for half its price, just to win the deal from the other competitors.
2. The deadline to complete Phase 1 was a contractually agreed date and hence it could not be extended.
3. The attrition rate in the Consortium and HP Project team was high, and we lost most of the Technical expertise.
4. The scope was not well-captured in the SOW, Contract, BRS and SDS documents. There was no defined document hierarchy in terms of the Proposal, Contract, BRS and SDS. This made it difficult to control scope.
5. Consortium worked in silos.
6. The relationship with the Customer declined, and the trust factor was missing.
7. The technologies from the Vendors were fairly new in the market.

Based on the above issues, I worked at improving the health of the project from a Project Management stand-point, by putting in place the following:

1. Organized regular social sessions with BNM. Won their trust and confidence by providing them a proposal which consisted of various approaches/actions to bring this project back on track. Reporting templates were re-designed by me and shared with BNM. BNM at first did not agree to the reporting formats, since they wanted us to follow their formats. However, when they saw the content and the level of detail that was provided in my reporting format, they agreed to use this format for subsequent project meetings.
2. Processes were put in place to manage Quality assurance, Communications and to manage scope.
3. The SDS (System Design Specification) was re-written with a greater level of detail, and this controlled the scope in a certain way. This was resisted by BNM due to the contractually agreed dates for SDS sign-off. However, I managed to convince them, to parallel work on the SDS, while we kick-start development. We managed to get an extension for the SDS sign-off.
4. I engaged an Overall Architect from HP Australia to help in the overall integration of the various technologies that were used in this project
5. Enforced the Communication Plan between BNM and HP and also between HP and the Consortium to enable alignment and engagement.
6. I got the offshore partners to be onsite in Malaysia during the development and testing periods. Secondly, we co-located the team to work together. This was resisted by the consortium at first due to the high-costs. But we got BNM's approval to provide a space at their premises to co-locate the entire team, citing integration of the various components was key to the success of Go-live.
7. Since the contractual date for Go-Live was 2nd July 2012, BNM could not provide an extension to this date. I worked with my management on a strategy to deliver at least the core components by 2nd July, with the agreement from BNM. Daily monitoring was implemented, with regular checkpoint meetings with BNM and the consortium to achieve this milestone.
8. I got the Consortium members to ensure skilled resources were deployed on the project.
9. I engaged some of HP's best shore resources, and also some of the local partners, who were skilled in the earlier versions of these products. Got trainings organized for the team. Most of the work done was on a trial and error basis.
10. Enhanced the Risk & Issue Register, and solicited input from the team to capture every risk in a centralised location.
11. Worked on the resource management, optimization and allocation of resources throughout the duration of the project.
12. Organized 1-2-1 sessions with the team members, scheduled more team meetings and activities, to make everybody feel important and responsible.

Besides improving the health of the project, I also had to ensure that the Financials and Governance of this project were managed well. I worked with the dedicated PMO team, to ensure that we reported these accordingly on a regular basis.

3.2. *Enumerate and describe the key decisions you made, and the reasons for making them as you did.*

As part of the remediation of the ISS project, there were some key decisions that I had to make to bring this project back on track, along with building the relationship and trust of BNM. Below are some of these decisions:

1. As a first step to manage and control scope, since it was not properly documented in any of the formal deliverables, I got the team to re-write the entire SDS document with the lowest level of granularity. I convinced BNM that this is the only way for all the teams to gain clarity on the expected outcomes. We had to get an extension from BNM on the SDS sign-off dates. But at the end of this exercise, we had a scope statement that we could always fall back on.
2. The consortium of partners worked in silos. Some of their teams were located off shore. Each vendor worked on their own products/solutions, and they had no interest in the other solutions provided by the other vendors. So a holistic and integrated view was completely missing. I did foresee that we will hit major issues when we start the integration testing because that would then be the first time the products would be tested against one another. So I started scheduling regular calls with all the vendors to discuss the end-to-end solution, besides checking on the progress of each. I made the decision to co-locate all the vendors once development was completed, prior to the SIT (System Integration testing). I got the approval from BNM to provide us a space for the entire team in BNM's premises. This greatly helped in the various integration tests, also due to the fact that BNM team worked alongside our team.
3. The project lacked Technical expertise to integrate all the components. We could not get local expertise in Malaysia. Hence I made the decision to bring an Architect from Australia, to handle the end to end integration. This proved advantageous because BNM also looked forward to some senior technical guidance from another perspective. It was easier to manage the expectations because BNM listened to our Technical advisor.
4. The contractually agreed Go-live date for Phase 1 was 2nd July 2012. Besides being the contractually agreed date, it was also on the reputation of BNM, since they had committed this date to all their stakeholders. With the numerous complexities and challenges that this project faced, it became impossible to deliver this milestone. Hence I worked with my management on a strategy to deliver at least the core functions by 2nd July. We got BNM's agreement on this strategy, with the commitment to deliver the rest of the functions within the next 3 months.

3.3. *Describe the design method you used on this project and the rationale for its selection.*

For ISS project, we extensively used the following implementation methodologies/ approaches:

1. HP's standard Project Management methodology called FDGF, which is in-line with the PMI Standards. The methodology is a comprehensive set of methods, practices, and techniques to support successful delivery projects, from small, short-term engagements to large, complex, information-technology projects. The Project Management methodology enables PMs worldwide to plan and deliver projects in a consistent and effective manner. This methodology is based on best practices and concepts used by the Project Management Institute, incorporating the project management knowledge areas for integration, scope, time, cost, quality, human resource, communications, risk, and procurement management. These project management functions are integrated throughout the life cycle of the projects we plan and execute. We utilize the methodology to optimize productivity and increase effectiveness during project planning and execution
2. The Waterfall model was initially followed at the start of the project, but towards the Integration stages, the Agile model kicked in, mainly due to the absolute need for Phase1 to be delivered by 2nd July 2012. The Agile approach proposed and agreed with BNM was:
   a. To deliver the core components that was essential to go-live by 2nd July.
   b. The identified components will be delivered every week, and will go thru the development, SIT and UAT before it can be implemented in the production environments. Weekly schedules were thus planned.
   c. The remaining components of Phase 1, to be delivered as part of weekly releases over duration of 3 months thereafter, and will follow the same approach as stated above.

By following the agile approach, we were not only able to abide by the contractual obligations but also did not impact BNM's reputation with their stakeholders.

For implementing the Data Warehouse and BI components, we also used HP's Global BI Implementation Methodology which is one of the most highly regarded methodologies available today. Far from being just a conceptual and abstract collection of ideas, this embodies principles, standards and best practices embedded into a set of specifications and templates that are ready to be used. They function as real tools to the Implementation team, removing ambiguities in requirement and analysis, producing high quality reliable solutions in an extremely productive fashion. The methodology is highly iterative in nature, resulting in quick wins being turned into strategic solutions as the BI program moves forward.

From a solution/technology perspective we followed certain Design guidelines to streamline and standardize the various solutions provided by the Vendors such as:

- Standardized taxonomy for reporting
- Model driven architecture
- Work-flow based change management
- Streamlined data integration design

3.4. List the design tools you selected for use on this project and discuss the rationale for their selection.

For the ISS project, we used the following tools/methodologies provided by HP, to plan and deliver projects in a consistent and effective manner:

- HPs Global Project Management tool called Edge for Project Management and Governance
- HP's BI implementation methodology for producing high quality reliable solutions in an extremely productive fashion
- Quality Assurance – for ensuring solution meets quality standards
- Quality Testing – to deliver high quality solutions
- Stakeholder's Change Management – to manage Stakeholder expectations
- Taxonomy Methodology – a structured approach to convert BNM specific forms to XBRL mapped forms for accurate and efficient handling of data

Besides the above, some of the tools we used were MS-Project for Project planning and monitoring, MS-Office tools for reporting and presentations, MS-Visio for network diagrams.

The individual Vendors used their own products to design the various components of the ISS solution as follows:

- Information Portal – Oracle WebCenter suite
- Taxonomy & Submission – XBRL Technology (XPE, TD7, EAS, XDA and RBME)
- Metadata - SAP BusinessObjects Operational IM Package
- Data Integration (ETL/ELT) - SAP BusinessObjects Operational IM Package
- Data Quality & Profiling - SAP BusinessObjects Operational IM Package
- Analytics & Data Mining - KXEN
- Report - SAP Business Information and Analysis Package (Crystal Reports, Web Intelligence)
- Dashboard SAP Business Information and Analysis Package (Xcelsius Enterprise)
- Data repository - Oracle 11g Enterprise Edition

3.5. List the major deliverables of the project that you were responsible for or contributed to, and summarize the reason for their inclusion.

The ISS project had contractually agreed on a set of deliverables that HP needs to deliver, for each stage starting from Project Initiation up to Post implementation review. However, since I joined the project only during the design stages, the list below are the deliverables I was personally involved and responsible to deliver.

1. **System Design**
    - System Design Specification
    - Technical Design Specification (Infrastructure Architecture)
    - QA Report and Certification
2. **Integration Services**
    - Integration and Interface Specification (delivered as part of System Design Specification)
    - Compatibility matrix (delivered as part of System Design Specification)
    - Integration services (delivered as part of Technical Requirements Specification and Technical Design Specification respectively)
    - QA Report and Certification
    - Operation Manual and System Manual
3. **Development and Customization**
    - Developed programs and database
    - QA Report
4. **Data Mapping and Migration**
    - Data mapping and migration strategy and approach
    - Data mapping and migration design specification
    - Developed program on data mapping and migration module
    - Data migration test plan
    - Historical data migrated into EDW
    - Data mapping and migration manual and troubleshooting guide
    - QA Report
5. **Test Planning**
    - Test Plan (Test strategy and approach)
    - SIT Test Cases
    - Performance and Stress Test Plan
    - QA Report
6. **Systems Integration Test (SIT)**
    - SIT KPI and progress report
    - SIT Defects Log
    - Performance and stress test progress report
    - Performance and stress test report
    - QA Report
7. **User Acceptance Test (UAT)**
    - UAT progress report
    - UAT Defects Log
    - QA Report and Certification
8. **System Cutover**
    - Systems deployment plan (Cutover and fallback plan, cutover checklist including pre-production test)
    - User manuals
    - Systems Administration Manual
    - Systems Operations Manual
    - General Troubleshooting Guide
    - Final Acceptance Form

9. **Customized User Training**
    - Training and Knowledge Transfer Strategy and Plan
    - Training Materials
    - Training Sessions
    - Training Feedback Form
10. **Stakeholders Change Management**
    - Stakeholders Change Management Plan
    - Post implementation Change Management Plan
    - Communication Strategy and Plan
    - Change Management Activities Log
    - Communication Content / Messages
    - Change Management Feedback Form
11. **Production Support During Warranty Period**
    - Production Support Plan and Escalation Procedure
    - Problem Log
12. **Post Implementation Review**
    - Post Implementation Review Report

4. Results

4.1. Was your solution implemented? If so, describe the role, if any, you had in the implementation. If not explain why not.

The Phase 1 of the ISS project was successfully implemented despite the challenges and complexities we faced in the areas of scope creep, insufficient budget, varied technologies, too many solution providers, lack of processes, low client satisfaction, poor quality and insufficient resources. My role as a Project Director was to remediate this project and bring it back to green, by addressing the various complexities and challenges faced by the Client, HP and Consortium. I joined the project during the design stages, when the Business requirements phase was already signed off. My role is as follows for the various stages in the project:

1. Design stage – We first addressed the issues regarding scope, so that it could be locked down. Although the SDS (System Design Specification) document was ready to be signed, I insisted that it must be re-written at a more granular level, so that there is clarity in the expected outcomes for each deliverable. HP was also contractually obligated to follow the SDS dates. Despite that we still proceeded to get BNM's approval for an extension on the SDS dates, and delivered it within the extended timelines. Also by bringing in the Architect from Australia, it greatly helped to beef up the team in terms of technical expertise.
2. Development – The Consortium partners worked in silos, and didn't have the holistic view of the entire solution. Some of these vendors were off shore and hence communication and time zone challenges became a barrier. Although I initiated regular team meetings with the consortium, it didn't have much effect on the outcomes produced, since neither party could visualise the end product. So I made a decision along with my management to put pressure on the vendors to move their teams back to HP premises for the second half of development, just prior to the integration testing.

3. SIT & UAT – For the integration Testing, we managed to get BNM's approval to shift the entire team to their premises to work closer with the Client's team. This move proved very effective since it resulted in a shorter time to resolve and address issues. The solution was put to test from an end-to-end perspective, and we faced numerous technical challenges due to the varying technologies and non-compatibility of some of the platforms. Some of the technologies were also outdated and they newer versions brought other challenges. The teams put in a lot of effort to resolve the technical issues. SIT was conducted by our own team (HP & consortium), while UAT was conducted with BNM team. It was at this stage, based on the outcome of the testing we made a decision that we would be able to deliver only the core functionalities on 2nd July 2012. This date was key because BNM had to honour their commitment towards their stakeholders. We drafted a proposal defining the core functionalities that would be ready on 2nd July, and the remaining functionalities that would be delivered 3 months from thereon. We also discussed this list with BNM since they had differing views on the priorities. Once this list was agreed, we began to focus the team only to deliver this list by 2nd July 2012. We finally achieved this milestone.
4. Cut-over / Roll-out – Subsequent to the Go-live on 2nd July, we followed the Agile methodology to release small packets of features on a weekly basis. A weekly plan was prepared to incorporate dates for development, SIT, UAT and cut-over to production, for the set of features that were scheduled to be rolled out each week. Within the next 3 months after 2nd July, the remaining components for Phase 1 were also delivered to BNM.

4.2. *Assess the overall success or failure of the project. Comment on client satisfaction, attainment of objectives, and ultimate versus proposed cost and schedule.*

When I took on the project during the design stages, Client satisfaction was at its lowest. After proposing to BNM on the intended approach to bring the project back to green, I was able to win back their trust and support. But the initial damage of committing to low budgets and unrealistic deadlines was already done, and could not be rectified. Hence we could only try and win back the customer's trust and delivering what is possible within the 2nd July 2012 timeframe. But we ensured that BNM was engaged in all stages of the project, along with including their team to work along-side our team. This greatly improved the situation to get the required support from BNM. Towards the Integration stages, when we realised that it was highly impossible to deliver the entire scope for Phase1, despite working 18-20 hours a day, we proposed to BNM the delivery of core functionalities by 2nd July that will help them to honour their commitments to their stakeholders. BNM supported us in this approach as well. So in summary, I would say that BNM supported us in this entire journey of delivering Phase 1. They were constantly engaged at every stage in the project, and issues and risks were proactively managed and communicated upfront. In terms of budget, we had an overrun, because the scope, technologies, hardware and resources were under-estimated during the Proposal stage. But in terms of schedule, we had a few extensions, but with BNM's approval, and managed to deliver on the agreed dates.

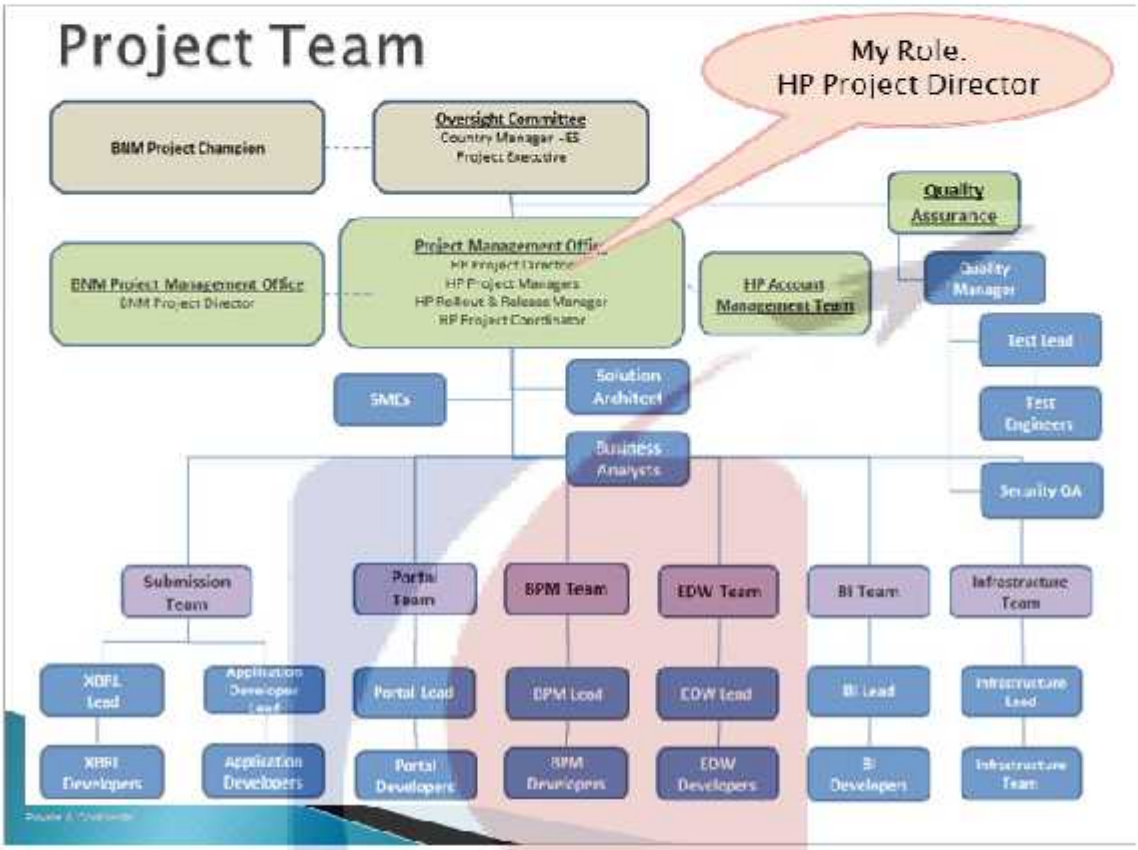
However, looking into the challenges faced during Phase 1, HP leadership team decided to terminate the contract with BNM for Phase 2 & 3. I was involved in completing the closure and other legal formalities with BNM and HP.

4.3. Lessons Learned

In retrospect, what you might have done differently on this project and what lessons did you learn?

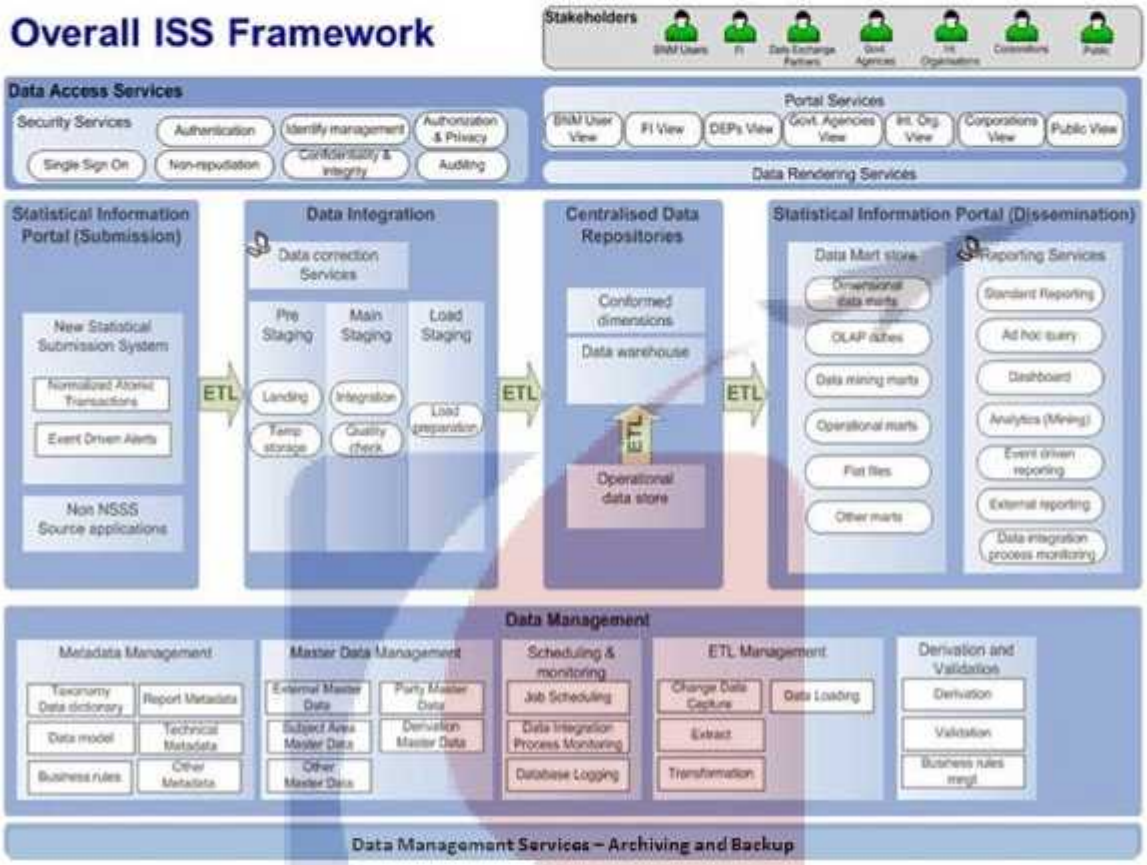
a. The scope is the foundation of the project. If this is not properly defined, then the project never gets into closure. Hence, the scope needs to be defined at a very granular level in the Business Requirements Specifications (BRS) and the System Design Specifications (SDS) documents.
b. The document precedence also needs to be defined clearly, since there are many a time where Clients tend to either refer to the SOW, Proposal, BRS or the SDS to get what they require. Once we define which document supersedes, then it becomes clear that only that document will be referred to at any given point in time.
c. Rules of engagement need to be established with the Client and Partners, in order to avoid any kind of miscommunication. This mean that's our Communication Plan, Configuration management plan, Stakeholder matrix, and Change Management plan need to be well-defined
d. Sometimes, we do not pay attention to minor requests from Clients because they could be just a few minutes task. But a volume of such small requests could turn out to be very impactful to the project timelines, if not managed well. Hence Change requests, no matter how small, needs to be raised and managed with the Client throughout the project.
e. When we communicate project status, it needs to be accurate. This means that we must have the necessary evidence to support the status. If not, this could result in losing the Client's trust and our authenticity will be questioned.
f. When we deal with Suppliers, it is essential to check all their deliverables for quality. From this project initially I would trust the Vendors when they deliver a component, but when it had serious technical issues, I learnt that it needs to be tested and validated before communicating to the Client. Also the commitments made be the vendors' needs to be tracked and monitored closely. For e.g. their definition of 70% completion may differ from the reality.
g. The resource plans provided by Vendors needs to be validated thoroughly. In most instances, I realized that although the resource plan looked good on paper, it was almost non-existent in reality.
h. When we have multiple teams working on core components and when it involves major integration, it is best for the teams to be co-located and preferably working closer to the Client.
i. The Plans that we created for the ISS project had to be changed every day because the environment was very dynamic. Creativity is required to arrive at plans and strategies, in order to meet fixed deadlines
j. As the main System Integrator, an overall Architect is a key role, and this person must be assigned even before the project starts, in order to put together the design and integration components.
k. As part of this project, we relied a lot on HP's global expertise, due to the lack of skillsets in HP Malaysia. But by building local competence on the required skillsets, reduces dependency on partners.

HP Project Team (including Consortium)

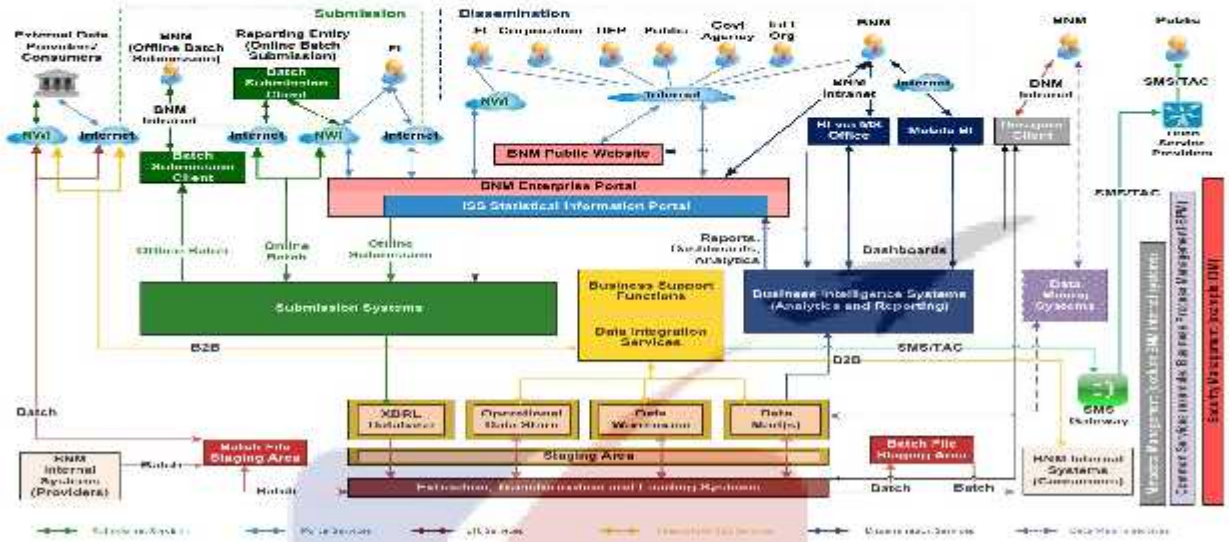


AUSTRALIAN COMPUTER SOCIETY

Overall ISS Framework

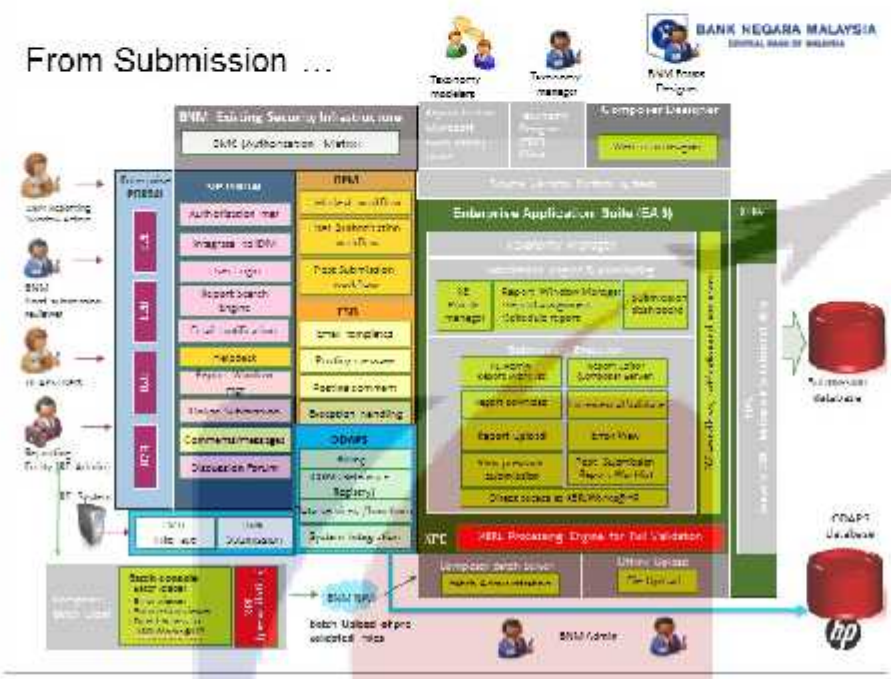


Logical Architecture

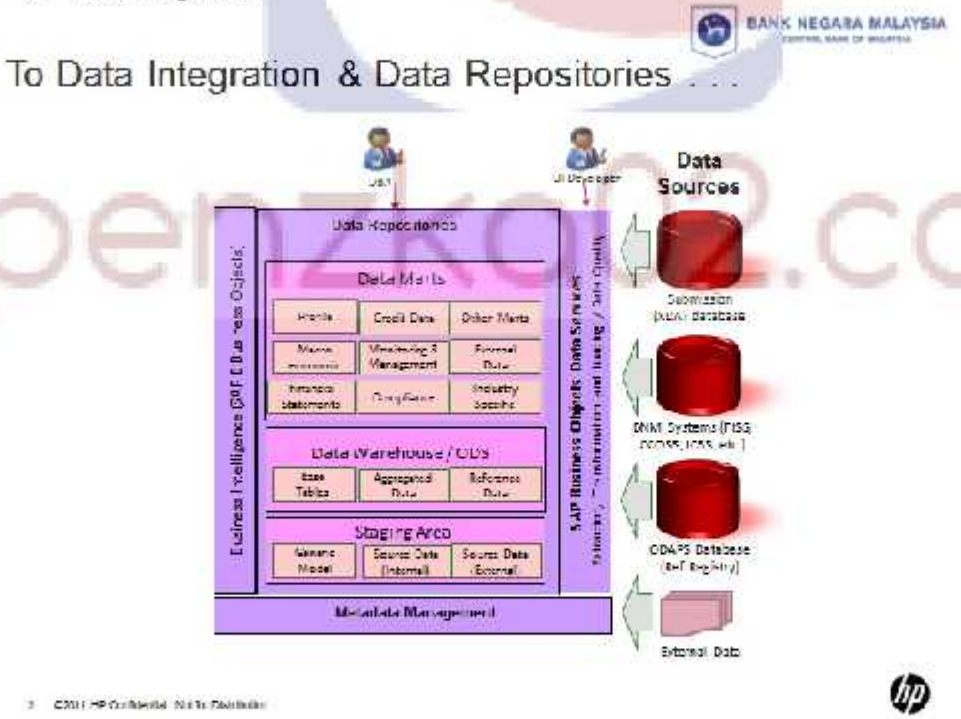


The 3 core modules in ISS

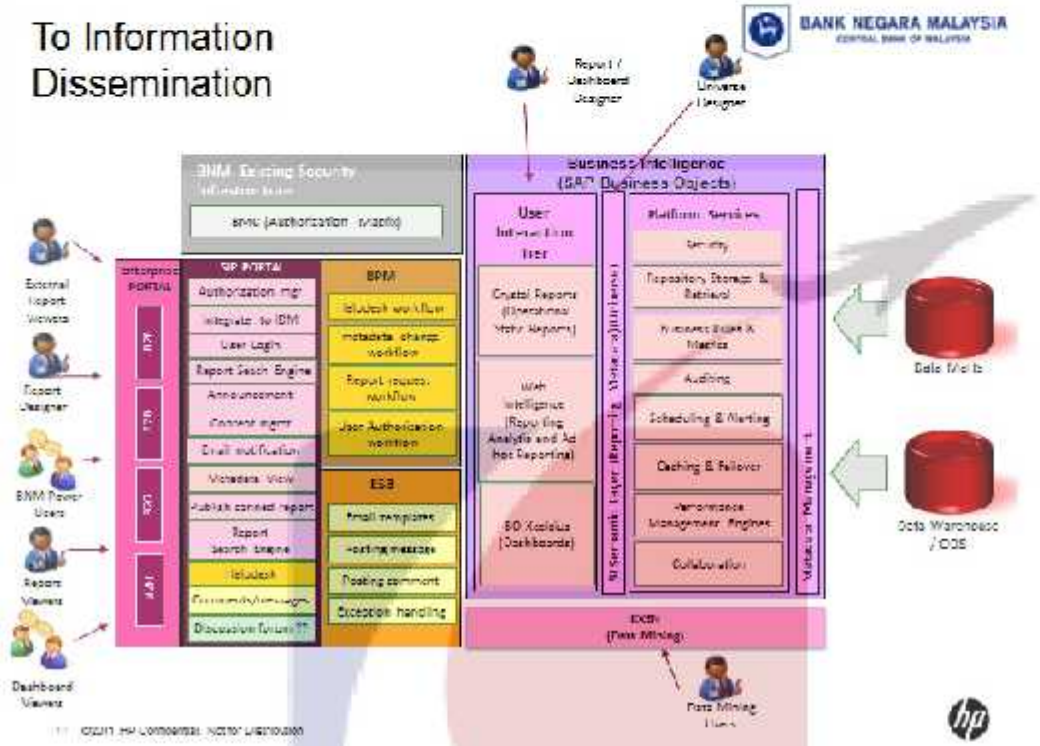
a. **Submission**



b. **Data Integration**



c. **Information Dissemination**



Revised Project timelines for Phase 1 vs the Original (Revisions indicated in red)