The Republic of Vanuatu/La République de Vanuatu

Office of the Prime Minister/Bureau du Premier Ministre

Office of the Government Chief Information Officer (OGCIO)/
Bureau du Chef de Service de l'Information (BCSI)

OGCIO
Portfolio, Program and Project Management (PPPM) Plan

August 2013

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Greetings from Fred Samuel, Chief Information Officer!

Welcome to our plan for portfolio, program and project management. This plan is the first ever such plan by the Office of the Government Chief Information Officer (OGCIO), and as such represents a major milestone in the development of the Office.

Portfolio, program and project management is a key procedure in the assessment and control of any major ICT (information and communications technologies) effort. To date OGCIO has undertaken major steps in portfolio, program and project management, namely identifying hundreds of potential ICT projects within the Government of Vanuatu (GoV), ranking those projects using carefully selected criteria (including stakeholder input), and identifying those top priority projects to pursue.

This Portfolio, Program and Project Management (PPPM) Plan takes the next steps in this area, by:

- Identifying an international standard to use in future PPPM
- Assessing the current state of PPPM
- Creating a vision of future PPPM processes, using the international standard
- Developing a transition plan to move from the current to the future state.

These steps will help OGCIO achieve its major goal: an "educated, healthy and wealthy Vanuatu."

We hope you enjoy reading our Portfolio, Program and Project Management (PPPM) Plan, and we invite your comments and inputs.

Thank you for your interest in the exciting world of ICTs!

Sincerely,

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Introduction

Portfolio, Program and Project Management (PPPM) has been internationally recognized as an important component of the toolbox used by any ICT organization or Chief Information Officer's (CIO) unit in achieving organizational objectives. PPPM is a series of inter-related organizational processes by which an organization evaluates, prioritizes, and allocates its limited internal resources to best accomplish efforts consistent with its vision, mission and values.

As can be seen from the general nature of this definition, PPPM is not limited to ICT organizations, and can in fact be implemented in any field by any organization, be it government, NGO or profit-making. It appears that PPPM has not yet been utilized by any Government of Vanuatu (GoV) organization, so in moving to adopt a PPPM approach, OGCIO is hoping to provide a role model for other GoV units and agencies.

The PPPM approach selected by OGCIO focuses on achieving the organizational vision, mission and values. Therefore, it is appropriate to begin by briefly recalling those items, which are detailed in the OGCIO Corporate and Business Plan, to set the stage for later discussion of PPPM.

The rest of this report provides the following sections:

- OGCIO vision, mission and values
- Identifying an appropriate international standard for PPPM
- Assessing the current state of PPPM in OGCIO
- Principles of good PPPM
- Developing a plan to move from the current to the desired state of PPPM.

OGCIO Vision, Mission and Values

As presented in the OGCIO Corporate and Business Plan, the following are the motto, vision statement, and values of the Office.

Motto of the OGCIO:

ICTs Blong Everywan!

Vision Statement of the OGCIO:

> High quality, high speed, highly useful, efficient, effective and affordable information and communication technology (ICT) tools for all Vanuatu residents, public servants and businesses, as a key enabler of good governance, and of the sustainable and inclusive economic and social development of Vanuatu.

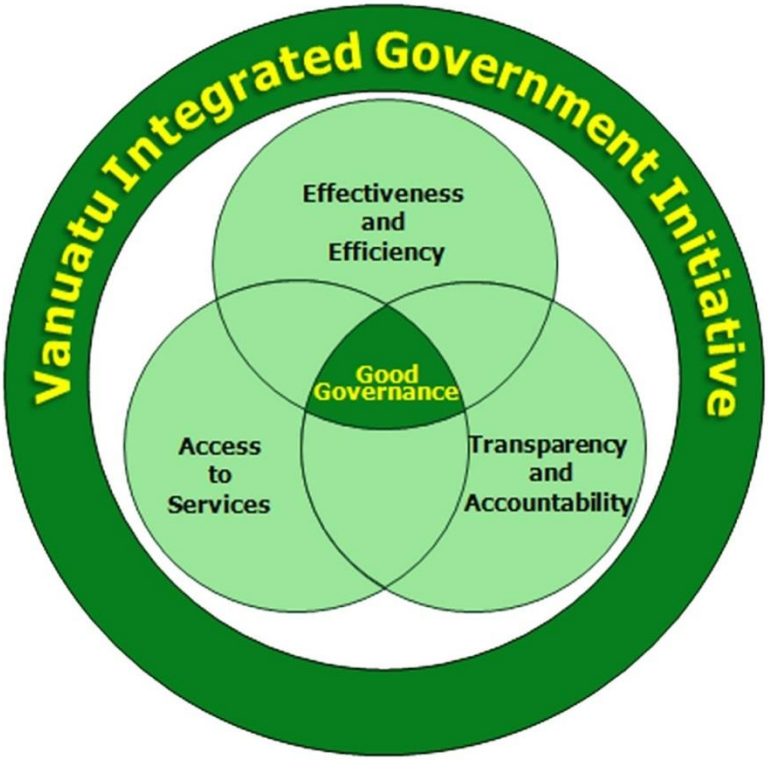
Mission Statement of the OGCIO:

The mission of the OGCIO is to:

- Lead and coordinate the Government's efforts to maximize contribution, efficiency and effectiveness of information and communication technology tools in achieving the national vision of an "Educated, Healthy and Wealthy Vanuatu."
- Lead and coordinate the effort to maximize the penetration of ICTs in society, government and business.
- Transform government service delivery where-ever feasible to be web-enabled, citizen-oriented, useful, rapid and accessible 24/7/365.
- Move up the various stages of the internationally-recognized e-government development sequence as rapidly as possible, to ultimately achieve seamless, integrated government service delivery.
- Lead and provide policy and strategy support to the iGov (integrated government) Initiative, coordinating efforts across all agency boundaries and at all levels, including for iGov budgeting and expenditures.
- Manage and standardize the government's network and ICT resources in a professional, customer-oriented and efficient manner.

OGCIO Values:

The figure below shows the OGCIO values and principles, and how they intersect and build to create Good Governance, a core value for the organization.



Identifying an Appropriate International Standard for PPPM

PPPM has been recognized as an important need for ICT and other project-oriented organizations since 1973, when it was first mentioned by Richard Nolan[1] as "investments in developing computer applications can be thought of as a portfolio of computer applications…" (emphasis added). Of course, pure project management techniques (as opposed to more complex portfolio management techinques) go back earlier, and are often dated to the critical path method pioneered by the US Navy in ship construction in World War II.

[1] Richard Nolan, "Plight of the EDP Manager," *Harvard Business Review*, May-June 1973

Since 1973, various sophisticated approaches to PPPM have arisen, including:

- The Project Management Institute's (PMI) Global Standard for Portfolio Management and the PMI Global Standard for Program Management[2]
- The PRINCE2 (Projects in a Controlled Environment) project management system, the IT Infrastructure Library (ITIL) service approach, the P3M3 (Portfolio, Programme and Project Management Maturity Model), and other systems as described in publications of the British Office of Government Commerce and registered as a trademark and creation of HM Government
- The Val IT governance framework, which is now closely integrated into COBIT (Control Objectives for Information and related Technology), both of which were developed by ISACA (previously known as the Information Systems Audit and Control Association, now just known by its acronym).

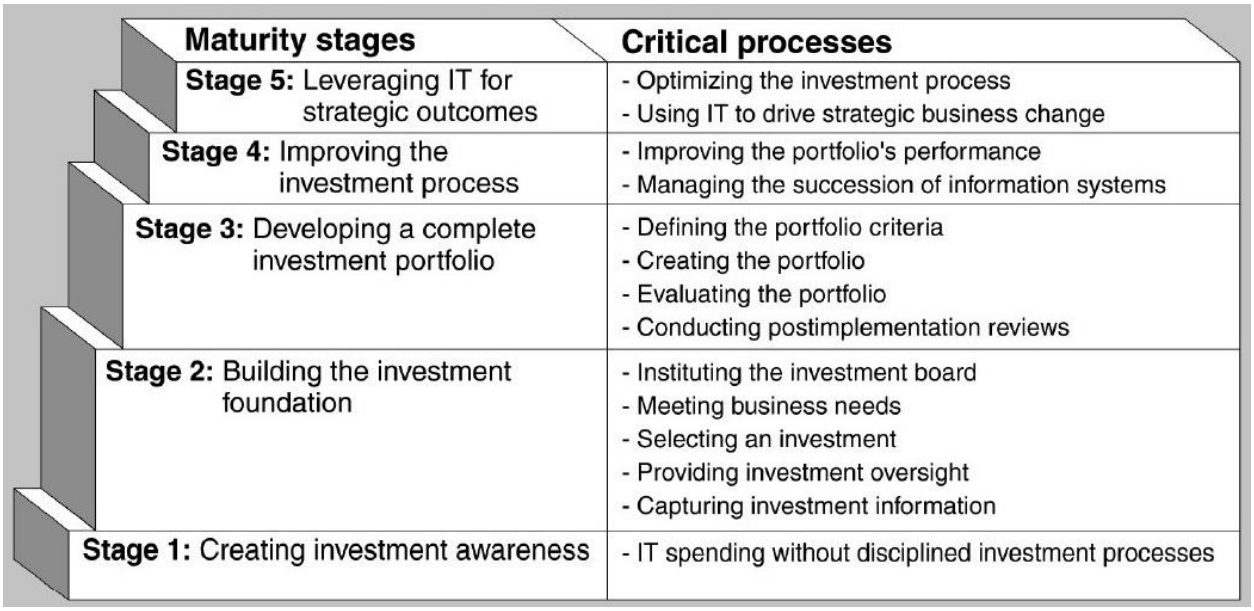
Of these three approaches (and various lesser ones), OGCIO has chosen the first as its standard, for several reasons:

- Relative ease of understanding
- Appropriateness of the PMI approach to a small, growing organization in a developing country
- Availability of PMI training in Vanuatu
- Relative ease of availability of materials and certifications in Vanuatu, either by in-house presentation or via distance learning
- Strong recommendation by the OGCIO Enterprise Architect (EA)
- Certification in PMI techniques by both the OGCIO EA and Security Advisor
- The fact that PMI is a world-wide standard not tied to a particular government, unlike ITIL/PRINCE2, and the fact that PMI was the first organization to offer certification specifically for project managers.

[2] Project Management Institute, *The Standard for Portfolio Management* (Newtown Square, PA: PMI, 2013, 3rd ed.) and Project Management Institute, *The Standard for Program Management* (Newtown Square, PA: PMI, 2013, 3rd ed.). Also included in the available PMI material is the important *Project Management Book of Knowledge (PMBOK Guide)* (Newtown Square, PA: PMI, 2013, 5th ed.), and various other publications.

Assessing the Current State of PPPM in OGCIO

The US General Accounting Office and Gartner[3] have developed a useful typology for ICT investment management and assessment, as shown below:



Maturity stages	Critical processes
Stage 5: Leveraging IT for strategic outcomes	- Optimizing the investment process - Using IT to drive strategic business change
Stage 4: Improving the investment process	- Improving the portfolio's performance - Managing the succession of information systems
Stage 3: Developing a complete investment portfolio	- Defining the portfolio criteria - Creating the portfolio - Evaluating the portfolio - Conducting postimplementation reviews
Stage 2: Building the investment foundation	- Instituting the investment board - Meeting business needs - Selecting an investment - Providing investment oversight - Capturing investment information
Stage 1: Creating investment awareness	- IT spending without disciplined investment processes

This model shows five stages of maturity in IT (or ICT) investment management, starting with "spending without disciplined investment processes" and peaking at "leveraging IT for strategic outcomes."

One of the first efforts undertaken by OGCIO was an intensive project to:

- Identify and describe all the ICT projects and systems in the GoV
- Survey stakeholders with regard to GoV ICT needs
- Develop criteria for ranking future projects
- Develop a typology of projects and systems for consideration
- Rank possible projects, bringing the number of possible efforts from 700+ to 20 high priority projects, plus some "quick wins" and other overhead efforts.

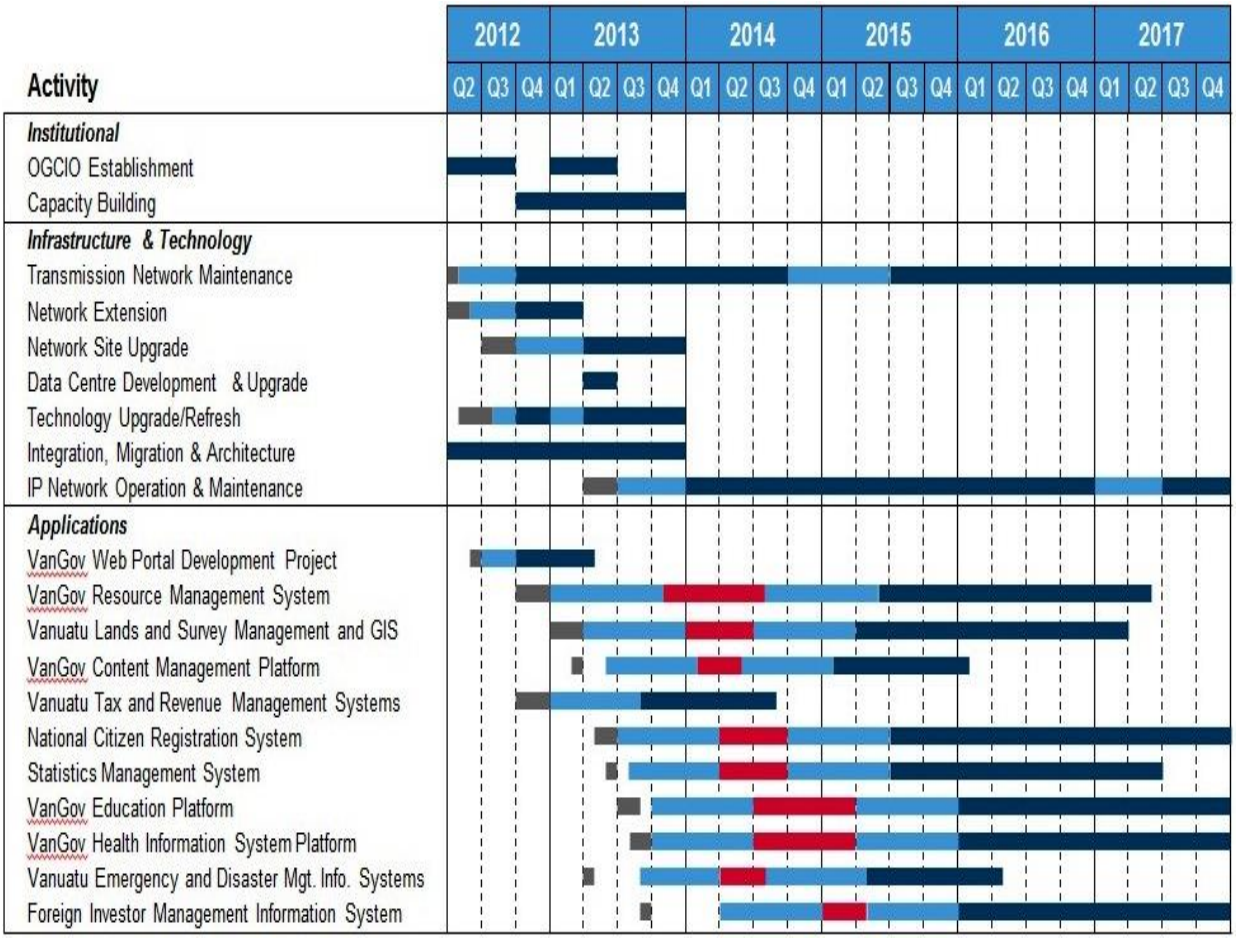
This well-executed effort led to the first-ever inventory and prioritization of ICT projects across the GoV, and immediately catapulted the months-old OGCIO from

[3] US General Accounting Office, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity* (Washington, DC: USGAO, 2004).

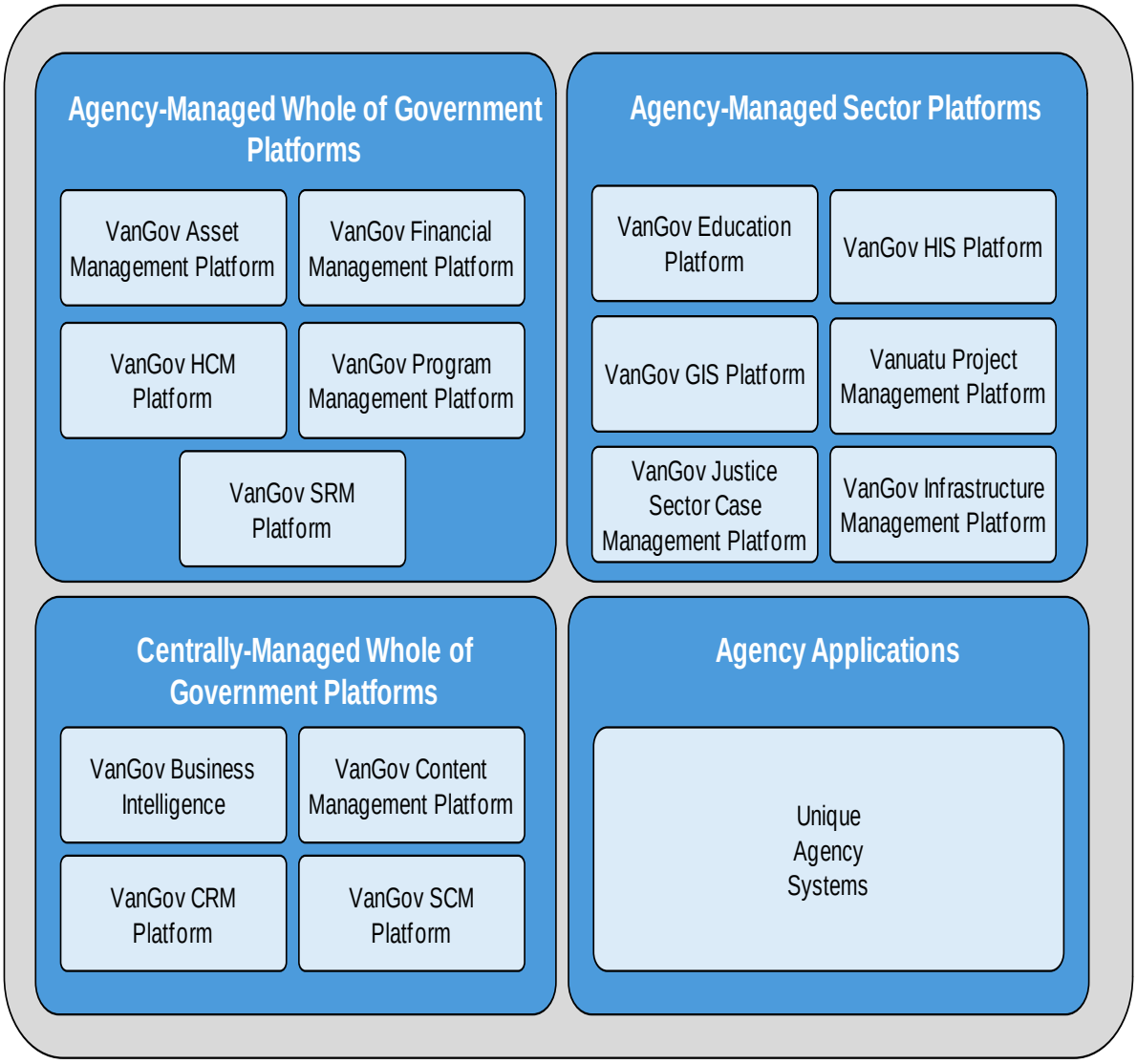
Stage 1 (random investments) to Stage 3 (develop a complete investment portfolio) in the GAO maturity model. Thus this effort was a very significant leap forward in sophistication in PPPM.

The effort resulted in many products, including a portfolio of high priority projects, a typology of the different types of systems and items required, and an estimate of the amount of investment required to implement the portfolio. These are shown in graphic summary form below. (Hundreds of pages of analysis and backup material are available in these areas; these graphics give just a high level overview of what was undertaken.)

OGCIO ICT INVESTMENT PPPM ACTIVITIES PLANNED OVER TIME



TYPES OF ICT INVESTMENTS OGCIO PLANS TO UNDERTAKE



Key: HIS = Health Information System
GIS = Geographic Information System
CRM = Customer Relationship Management
SCM = Supply Chain Management
HCM = Human Capital Management
SRM = Supplier Relationship Management

The last figure above shows that the initial capital and operational requirements in the first six years of OGCIO investment activity are high, totaling about 5 billion Vatu ($USD 50 million), or about 830 million Vatu ($USD 8.3 million) per year. The CAPEX costs then drop as the major systems have been installed, although each requires a "technology refresh" about every four years. Estimated efficiency gains and savings due to installation of the major systems is greater than the cost of the systems (as shown in light blue in the large trapezoid in the right of the chart), and in fact social and "public value" gains would be even greater.

A further, more detailed breakdown of the funds required for two years (in USD) is provided below:

OGCIO'S TWO YEAR BUDGET REQUIREMENTS FOR iGOV

COMPONENT/ACTIVITY	Estimated Costs (USD)			
	External Consulting	Govt Staff or Contractors	Outsourced Services or Materials	Total
Component 1 - Foundation Activities				
1.1.Establishment of ICT Inv & Mgt Processes	139,500	7,500		147,000
1.2.Establishment of iGov Institutional Structure	175,500	33,500	170,000	379,000
1.3.Establishment of EA & Tech Standards	222,000	9,000		231,000
1.4.Vangov Info Security Audit & Framework	222,000	27,000		249,000
1.5.iGov Network Integration and Operations	66,000	252,000	2,700,000	3,018,000
1.6.Govt Data Architecture Project Preparation	104,000	11,000		115,000
Component 2 - Quick Wins				
2.1.Vanuatu Audit Management System	16,500	2,500		19,000
2.2.Vanuatu Govt Web Site Devt Project	49,500	31,500	150,000	231,000
2.3.Government Agency ICT Support	33,000	154,000		187,000
2.4.Voter Awareness Campaign Facility	49,500	5,000	100,000	154,500
2.5.Coop and Ni-Van Business Reg. System	8,250	2,000		10,250
2.6.Market & Trade Data Subscription Service	16,500	2,000	15,000	33,500
Component 3 - On-going Activities	107,250	17,000		124,250
Component 4 - New Activities	123,750	15,000		138,750
TOTAL	**1,564,250**	**601,000**	**3,135,000**	**5,300,250**

This chart shows that the initial two year start-up investment is about $5.3 million USD, or about 500 million Vatu.

Thus in summary, this comprehensive effort provided OGCIO with a prioritized portfolio and typology of projects, and a good estimate of the funds required, thus setting the stage for the organization to move into Stage 4 and even Stage 5 of the GAO maturity model. Normally this effort would have been undertaken via a large, low-interest loan from a development bank, and would have corrected the historic under-investment in ICTs that GoV has experienced since Independence.

However, since this effort was undertaken in late 2011, GoV has decided that loans of any kind are not acceptable, since the government's debt burden is high. Furthermore, the GoV and OGCIO's major donor has not provide firm funding levels for OGCIO's operating budget as of this writing (more than six months into the 2013 fiscal year -- January-December 2013), and significant cuts in funding seem possible. Thus, OGCIO has been unfortunately reduced from Stage 3 (planning for major portfolio expansion) to Stage 1 (defending existing small investments and opportunistically – not strategically – seeking modest donor funding for small sized ICT efforts). Resources available were (and are) thus on the order of magnitude of tens of millions of Vatu (hundreds of thousands of US dollars) rather than billions of Vatu (tens of millions of US dollars).

To move back up to Stage 3 and above, OGCIO needs to:

- Regularize its operating budget allocation from the GoV. This amount needs to be approved, in place, and not significantly changed, at least two months before the beginning of the fiscal year (e.g., by November of 2013 for the 2014 fiscal/calendar year).
- Similarly, regularize its operating budget allocation from its major (and other) donors (AusAID and a World Bank grant). These need to be in place and agreed upon before the beginning of the next fiscal/calendar year.
- Secure a major source of capital funding. This could be a very large grant(s) or perhaps a portion of all major sectoral projects funded by donors across the GoV
- Secure an on-going source of increased operational and "refresh" funding. The reality is that ICT efforts, though very necessary, are very expensive, and spending needs are on-going, as technology, equipment, licenses, training and applications age and need renewal. Again, solutions here might be: on-going grants, portions of major donor projects, or perhaps designated percentages of each agency's budget being devoted to ICT capital and operation spending.

Once the above items and funding are in place, the question arises as to the level of PPPM expertise currently available in OGCIO to undertake Stage 3, 4 and 5 planning and execution. Here the answer is as follows:

- Currently no OGCIO in-house staffers are certified in PPPM techniques.
- Currently the out-sourced, expat Security Advisor and Enterprise Architect Advisor are well qualified and highly certified in PPPM techniques, including PMI approaches.
- Current OGCIO technical staffers are mainly trained and experienced in management of the Government Broadband Network, not in ICT strategic planning, investment analysis, PPPM, risk management, stakeholder management, and related disciplines.
- Therefore, there is a gap between what is needed to undertake Stage 3-5 efforts and what is available in-house. Outside experts can be hired (as was done in the 2011 effort), but are quite expensive and cannot generally stay more than 1-2 years. Hence building up in-house capacity is important.
- Mainly because of funding issues, lack of staff, and the newness of the organization, OGCIO is currently limited to managing a portfolio/program of projects which is relatively small in number, size and scope. These are listed in the table below.

OGCIO'S CURRENT PROJECTS

Project	Status
SOE Server Project	Underway in 2013
SOE Desktop Project	Will begin later in 2013 or in 2014
GBN Expansion to Phase 2	Underway intermittently as funding becomes available from ministries and agencies
METEO Data Center Upgrade	Plan developed
New iGov Network Systems & Architecture Phase 1 Project	Plan developed
Backup Infrastructure Solutions Project	Proposed, plan to be developed
Backup Generators Effort	Plan developed
Customs ICT "Visioning" and Upgrade	Visioning complete, plan and business case in place, donor funding needed for next phases
Law and Justice ICT "Visioning"	Underway

Tablets in the Schools, and various other similar efforts	Discussions underway
ICTs Used to Preserve & Expand Local Language	Plan developed, grant proposal submitted
m-Government Project	Proposal agreed in principle, will get underway soon
m-Health Project	Proposal agreed in principle, final OK needed
UAF ICTs in Schools Effort	Proposal agreed in principle, many details to be worked out by TRR with OGCIO/MoE input

Thus this relatively small portfolio of projects would appear to dictate an approach which begins with good project management, and continues gradually up the chain to program and portfolio management, as the portfolio expands.

Principles of Good PPPM

Discussing principles of good PPPM under the PMI approach requires the following sections:

- Incorporation by reference
- The difference between project, program and portfolio management
- Role of IT as a value seeker and creator
- Obtaining external inputs
- PPPM risk management
- Advanced PPPM techniques.

These sections are presented below.

Incorporation by Reference

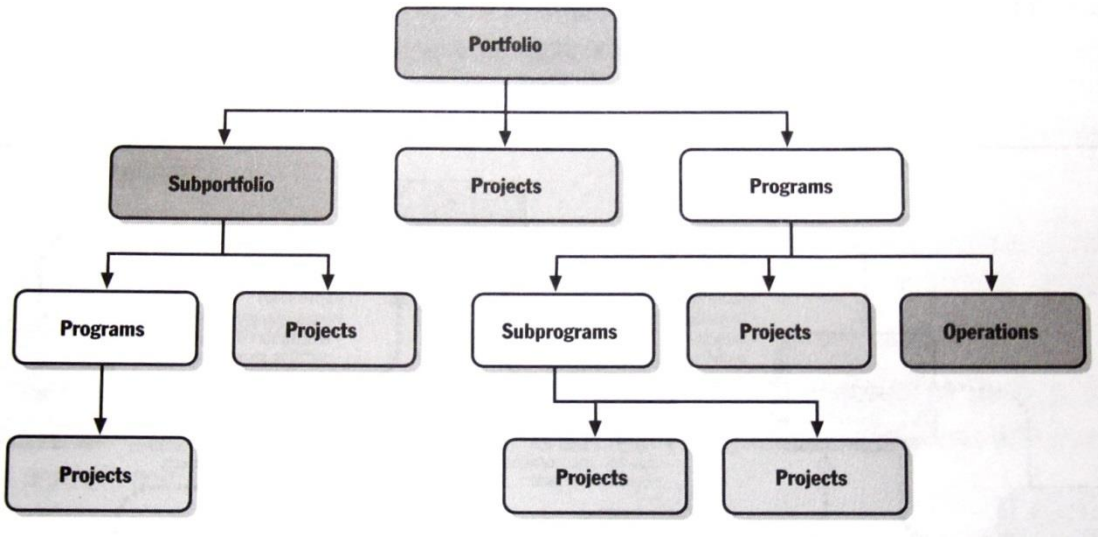
The Project Management Institute (PMI) Global Standard books (footnoted earlier) provide detailed information on how PPPM is to be undertaken in a regularized way. These books are therefore incorporated by reference into the OGCIO PPPM procedures, and this report will not repeat the books (each of which is over 175 pages long, and each of which has extensive associated training and backup materials available).

Thus this report will only provide a few highlights of how these Global Standards will be used in OGCIO, and will address some minor areas where the Standards are a little brief.

The Differences Between Project, Program and Portfolio Management

It is easy to confuse project, program and portfolio management. The PMI PPPM Global Standard books clarify this with the following chart.

HIERARCHY OF PROJECTS AND PROGRAMS WITHIN A PORTFOLIO



Here it can be seen that a "project" is the lowest level in the hierarchy. A project as defined by PMI in its *Guide to the Project Management Book of Knowledge (PMBOK)* (4th Edition, p. 434) is a "temporary endeavor undertaken to create a unique product, service or result." A "program" is a "group of related projects, subprograms and activities that are managed in a coordinated way to obtain benefits not available from managing them individually." A "portfolio" is a "collection of projects, programs, sub-portfolios and operations grouped together to facilitate effective management to meet strategic business objectives."

The chart below (from PMI) provides more detailed distinctions between the three key terms.

DIFFERENCES BETWEEN PROJECTS, PROGRAMS AND PORTFOLIOS IN SCOPE, PLANNING, SUCCESS & OTHER AREAS

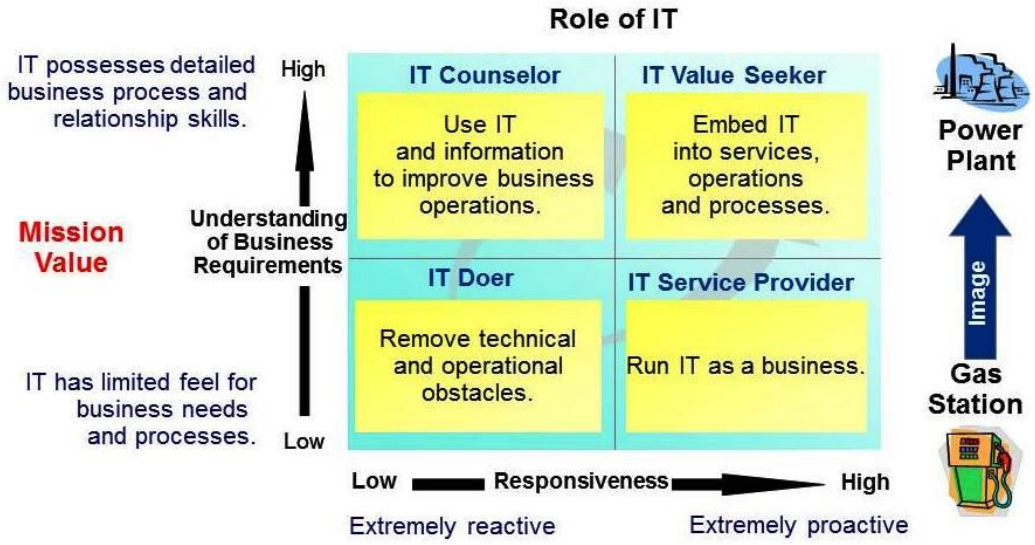
	PROJECTS	PROGRAMS	PORTFOLIOS
Scope	Projects have defined objectives. Scope is progressively elaborated throughout the project life cycle.	Programs have a larger scope and provide more significant benefits.	Portfolios have an organizational scope that changes with the strategic objectives of the organization.
Change	Project managers expect change and implement processes to keep change managed and controlled.	Program managers expect change from both inside and outside the program and are prepared to manage it.	Portfolio managers continuously monitor changes in the broader internal and external environment.
Planning	Project managers progressively elaborate high-level information into detailed plans throughout the project life cycle.	Program managers develop the overall program plan and create high-level plans to guide detailed planning at the component level.	Portfolio managers create and maintain necessary processes and communication relative to the aggregate portfolio.
Management	Project managers manage the project team to meet the project objectives.	Program managers manage the program staff and the project managers; they provide vision and overall leadership.	Portfolio managers may manage or coordinate portfolio management staff, or program and project staff that may have reporting responsibilities into the aggregate portfolio.
Success	Success is measured by product and project quality, timeliness, budget compliance, and degree of customer satisfaction.	Success is measured by the degree to which the program satisfies the needs and benefits for which it was undertaken.	Success is measured in terms of the aggregate investment performance and benefit realization of the portfolio.
Monitoring	Project managers monitor and control the work of producing the products, services, or results that the project was undertaken to produce.	Program managers monitor the progress of program components to ensure the overall goals, schedules, budget, and benefits of the program will be met.	Portfolio managers monitor strategic changes and aggregate resource allocation, performance results, and risk of the portfolio.

Role of IT as a Value Seeker and Creator

As mentioned earlier in the discussion of the maturity of OGCIO in its PPPM activities, the ultimate goal of an ICT organization that is functioning at a very high level, is to leverage ICTs to create value for customers, clients, users and other stakeholders.

The chart below (from Gartner) illustrates this concept in another way.

ROLE OF IT IN ACTIVELY CREATING VALUE
VS. MANAGING EXISTING SYSTEMS



Here we see that a low functioning ICT organization is reactive and has a limited understanding of business (or government) needs and processes. A high functioning ICT organization seeks to embed ICTs into services, operations and processes of its own and other agencies (or throughout the business), in such a way that ICTs become a "power plant" of increased value, efficiency and openness.

In military terms, ICTs become a "force multiplier," in which small, inexpensive units suddenly become enormously more effective, and in which all available forces are rapidly and accurately coordinated to dramatically increase overall effectiveness, agility and responsiveness in battle, relief operations, search and rescue, and other efforts.

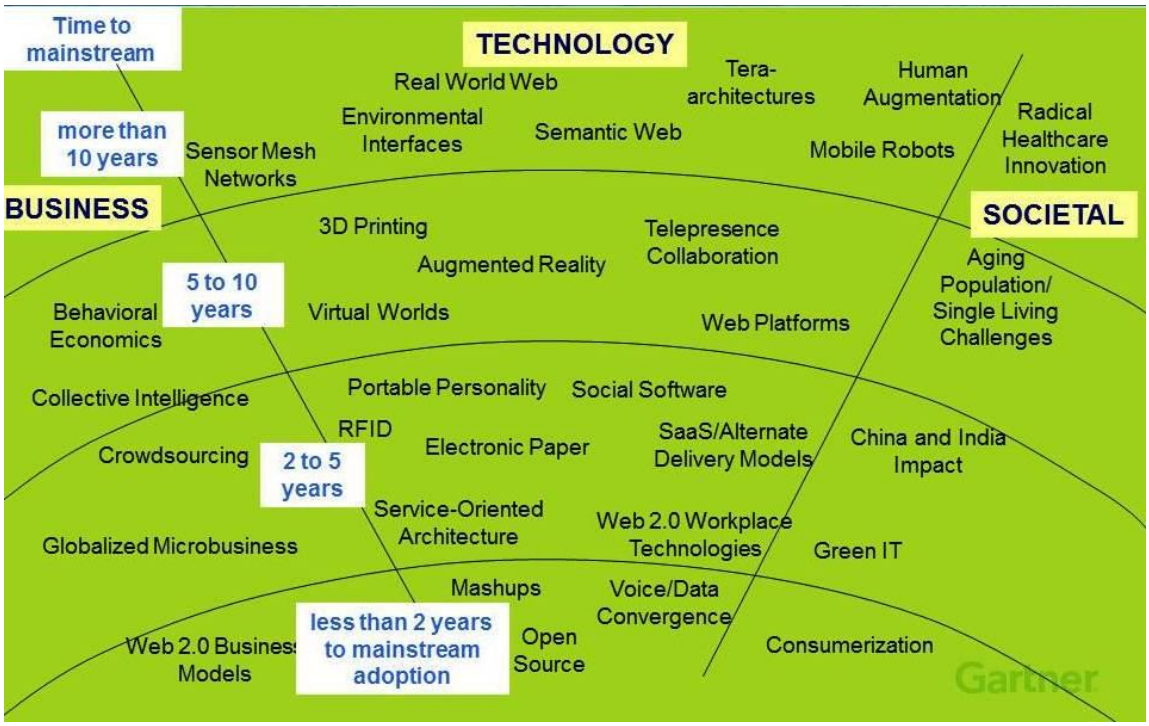
Obtaining External Inputs

The PMI Global Standards rather briefly describe the environmental factors analysis that an ICT organization should undertake, and recommend surveying the market, business environment, economy, etc., doing an analysis of comparative advantage, SWOT analysis and feasibility studies.

Two additional concepts which are useful and which should be utilized by OGCIO in advanced stages of PPPM are the "environmental scan" and the analysis of "technology hype." These are described below.

In the environmental scan, the ICT organization surveys the environment in a systematic way, annually or every six months, to analyze impacts of business, technological and societal factors, spread over a defined time horizon. The figure below shows this concept.

SCAN OF THE ENVIRONMENT TO OBTAIN USEFUL PLANNING INPUT



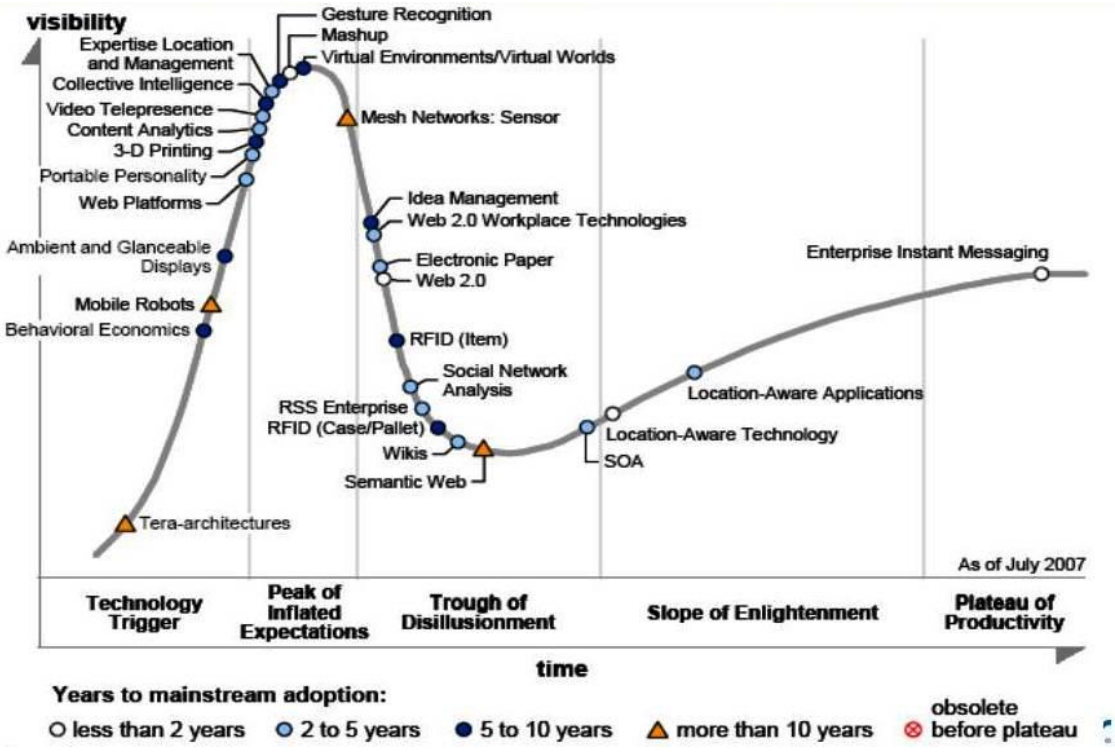
In this sample (from Gartner), numerous factors and inputs are identified, over a time horizon of less than two years, 2-5 years, 5-10 years, and more than 10 years. The findings of this survey are conveyed to the CIO and other ICT decision-makers.

Here in Vanuatu, obvious factors which would be added to such a scan include:

- Anticipated arrival of the submarine cable
- Deployment of O3b
- Resulting substantial uptake in ICT demand
- Establishment of ICT-based businesses
- Drop in prices for smart phones
- Drop in prices for high data rates
- Increase in coverage of 3G+, and eventual upgrades to 4G, 5G, etc.
- Possible use of ICTs for scams, Ponzi schemes, and related
- Effects of ICTs on local culture and language
- Demographic changes in Vanuatu society
- Etc.

Although scans are useful and even essential, it is important to understand that the media and suppliers often "hype" new technologies, exaggerating their speed of penetration and importance of the new development in everyday life.

THE "TECHNOLOGY HYPE" CYCLE AS A FALSE EXTERNAL INPUT



The chart above (from Gartner) shows they typical "hype cycle," in which there is a huge initial visibility for a new (or promised) technology, followed by a dramatic fall in expectations, followed by a slow growth in respect for the actual value delivered, followed by a final plateau in which the value delivered by that product is well understood. Thus it is important in the environmental scan to use well-regarded sources which critically analyze new developments, rather than suppliers or "sound bite" journalists. Good sources of critical (but of course not infallible) analysis include the following:

- McKinsey reports
- Gartner reports
- Booz & Co. (commercial) and Booz-Allen-Hamilton (government) reports
- Articles and ICT-oriented issues of *The Economist*
- Other similar sources.

Of course input from stakeholders is an important item in any environmental scan and in PPPM planning. This item is so important that a separate report will deal with this topic.

PPPM Risk Management

Identifying and minimizing risk is a key element in PPPM, and indeed is a major reason for undertaking careful PPPM planning activities. It is a fact of life and is well documented that many ICT projects and e-government efforts fail. Thus negative risks need to be carefully minimized. Conversely, PMI notes that "positive risks" exist, "are often referred to as opportunities," and these also need to be identified, analyzed, and managed. As stated by PMI:

> Risk control focuses on threats that could develop into actual problems, or issues, and opportunities that could add value to the program. Risk control involves implementing the actions and contingency plans contained in the risk response plan.

The elements of risk management include:

- Risk management planning
- Risk identification
- Risk analysis
- Risk response planning
- Risk monitoring and control.

Various elements which are present in a highly functioning ICT organization using PMI principles, which are not immediately obvious to untrained observers, include:

- Having a “risk register” of anticipated risks
- Identifying “risk owners” responsible for monitoring and controlling each risk
- Having agreed upon response strategies and fallback plans
- Having contingency reserves (which are separate at the project, program and portfolio levels)
- Monitoring risks for “symptoms and warning signs.”

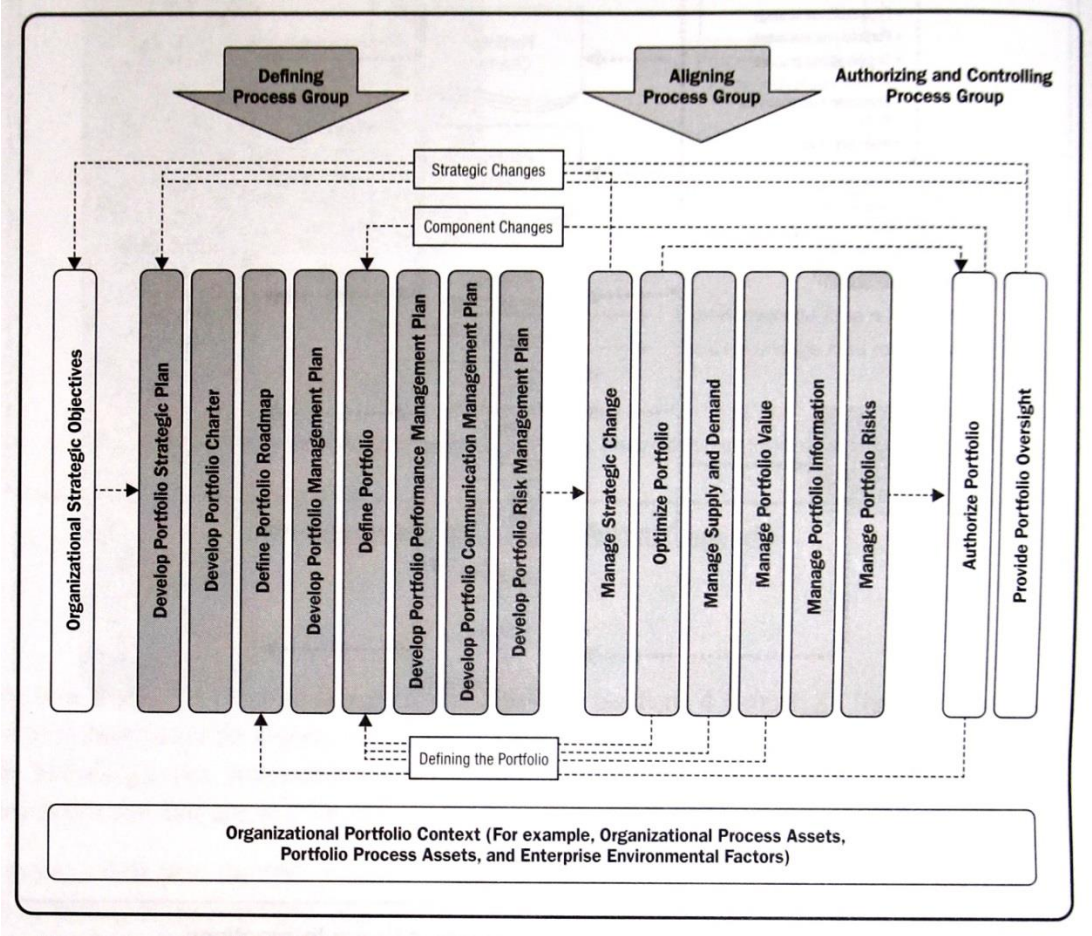
There is a danger that an organization’s ethos, rules or procedures will limit its ability to understand, analyze and respond to risk. This is dangerous and unprofessional. Objective analysis of risk, not driven by pre-conceptions, is vital.

Advanced PPPM Techniques

Once PMI PPPM principles are well established within an ICT organization, advanced techniques can be used to ensure that the portfolio and its components are measured, aligned and balanced. The two figures below illustrate two of these interesting advanced techniques.

In the figure below, we see that there are various plans to be prepared, in order to first define and second align the portfolio under the PMI approach. For example, under the defining group of activities, a strategic plan, a charter, a management plan, a communications plan and other plans are created. Under the aligning group, the portfolio is optimized, its supply and demand are managed, its value is managed, etc.

PROCESSES FOR DEFINING & ALIGNING THE PORTFOLIO

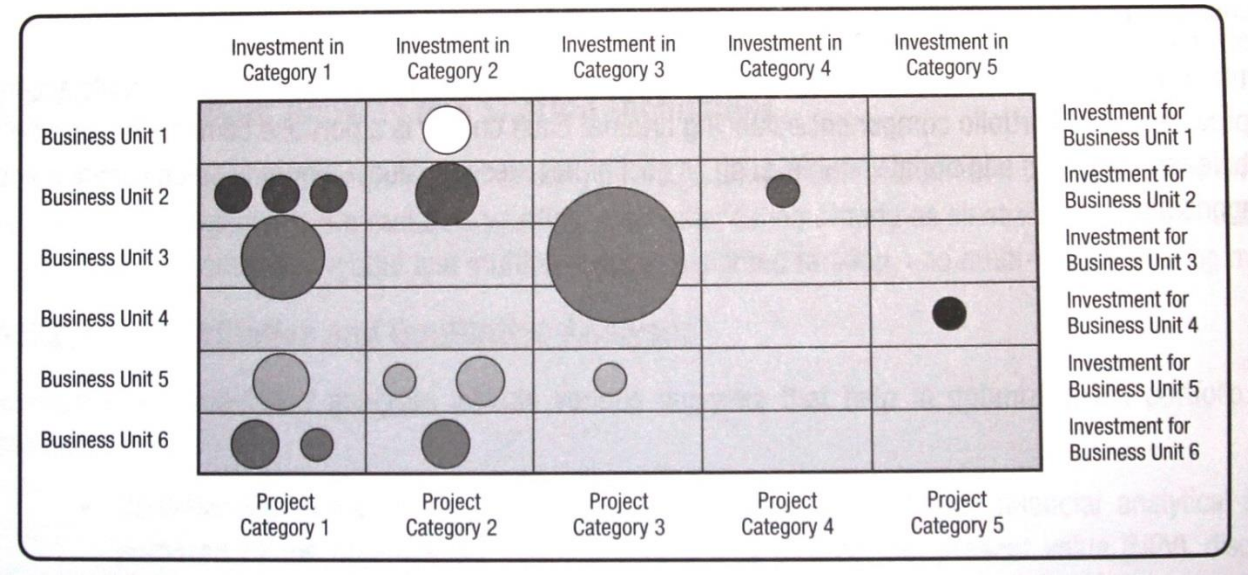


Needless to say, these techniques require considerable overhead time, training, and sophisticated analytical capabilities.

To illustrate some of the sophisticated analytical techniques available once a portfolio is established and measured, consider the PMI "bubble chart" presented below, one of several techniques recommended for balancing an ICT portfolio.

Here we see that the chart helps the decision-maker visualize the distribution of projects and programs across the various business units, and across various categories (as defined by the strategic plan). Thus a portfolio that is not over-weighted toward one business unit or category is avoided.

TYPICAL BUBBLE CHART USED IN BALANCING A PORTFOLIO

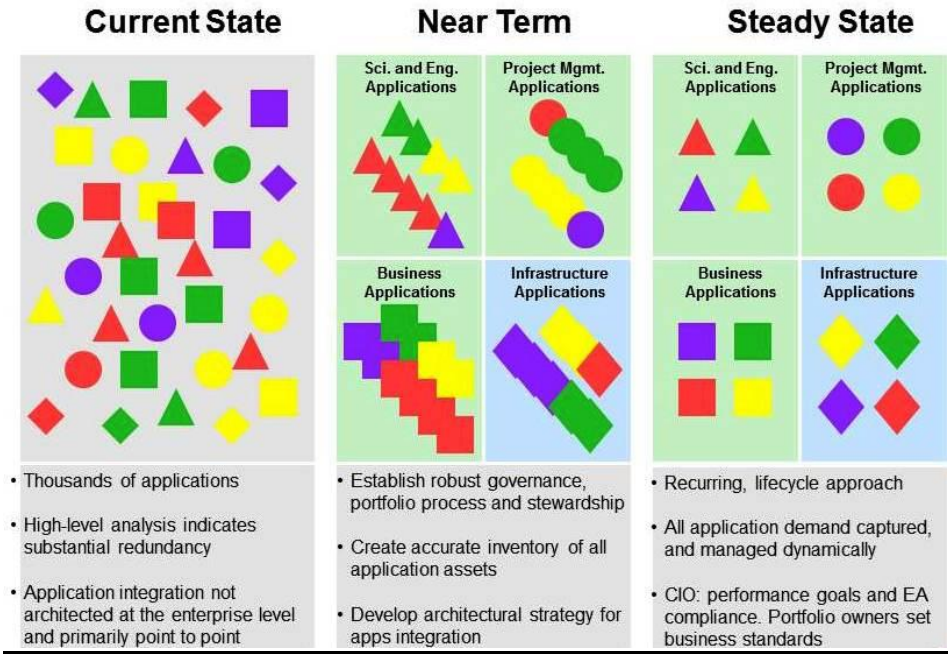


Developing a Plan to Move from the Current to the Desired State of PPPM

As discussed previously, OGCIO has undertaken considerable analytical efforts to move from Stage 1 to partial Stage 3 functioning. These efforts need to be re-captured and built upon, over a multi-year period. Also, it is evident that the current OGCIO portfolio is rather small, and that basic project management needs to be the initial focus, followed by program and portfolio management in the out years.

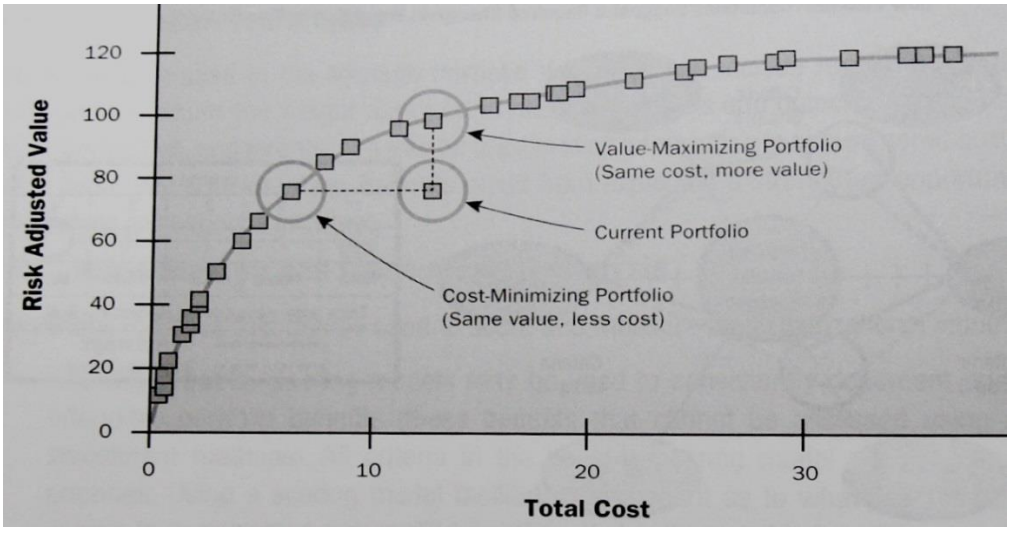
Another Gartner graphic may help visualize this process. As shown below on the left, at first in any nascent organization, the projects and programs are in a jumble. Then, through inventorying and analysis, in the middle frame a comprehensive inventory and plan is arrived at. (This has been done at OGCIO.) In the out years (on the right), good PPPM planning and execution is in place, and the strategic plan is being executed, funding is in place, high priority projects and programs are being tackled first, and existing operations and projects are fully resourced and are being managed well.

MOVING FROM THE CURRENT STATE TO AN INVENTORY AND THEN A PRIORITIZED, ON-GOING PORTFOLIO



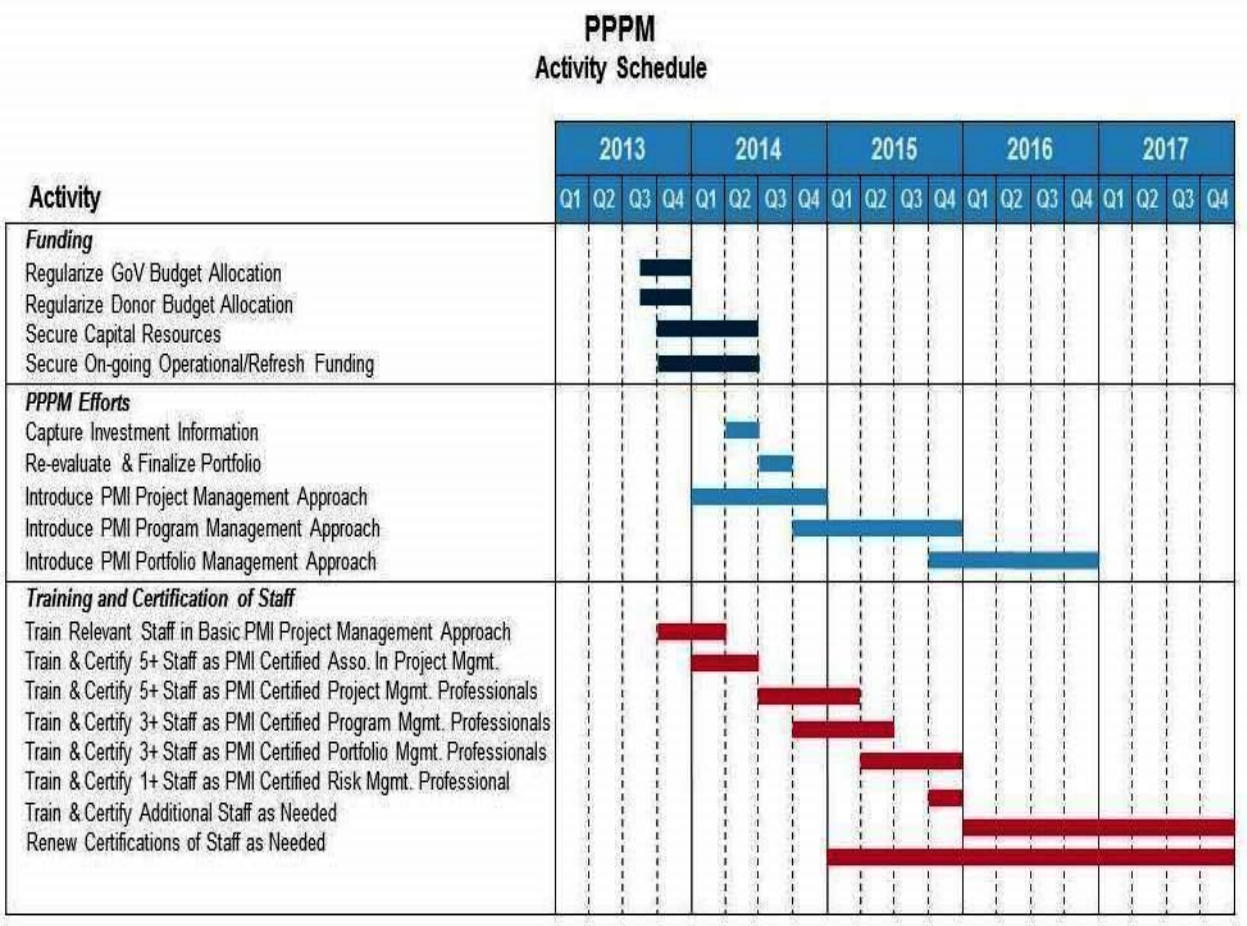
Once the portfolio is measured and the steady state is almost reached, analytical techniques can be used to maximize the value yielded by the portfolio. This is illustrated in the figure below.

MEASURING THE MOVEMENT FROM THE CURRENT TO A VALUE MAXIMIZING PORTFOLIO



This PMI chart is based on Harry Markowitz's "modern portfolio theory," and gives decision-makers an analytic tool to optimize portfolios, given resource constraints. The portfolio is considered "efficient" if it has the best possible expected level of return for its level of risk. In the center left can be seen a current project in the portfolio which is below the efficient level, but which is either reduced in cost or increased in value to reach the efficient horizon.

The figure below captures the major tasks required in three areas – funding, PPPM expansion, and PMI training and certification -- over the next several years, in order for OGCIO to reach a high level of PMI PPPM functionality.



Short term recommendations that flow from this plan include:

- Regularize funding – this is key

- Begin training 4-6 relevant staff in the basics of project management, using a local vendor who can utilize the PMI approach. This effort should begin as soon as possible, to allow the benefits to flow into the important SOE projects that are getting underway.

- Use the EA and Security Advisors to provide short injections of PPPM expertise, possibly by "brown bag" or catered lunches and lectures, or by short, one hour meetings from time to time.

- Identify several key staff who could reach the first or second tiers of PMI project management certification. Begin exploring the costs, timing, location and feasibility of obtaining such certification. PMI Associate level project management certification requires a secondary degree (high school diploma or equivalent), and at least 1500 hours of project experience or 23 contact hours of project management education, and an exam. The Project Management Professional (PMP) certification requires a secondary degree, five years of project management experience, and 7500 hours (about 3.5 years) directing projects, 35 contact hours of classroom training in project management, and an exam; OR a four year degree, three years of project management experience, 4500 hours leading projects, 35 contact hours of classroom training in project management, and an exam. These certifications would seem to be well within the reach of several OGCIO engineering staff.

- Purchase from PMI the *Project Management Book of Knowledge (PMBOK Guide)*, for use in the OGCIO's reference library. The cost of this is $66 USD for non-members and $50 USD for members. The two other key PMI publications, *The Standard for Portfolio Management* and *The Standard for Program Management*, have already been purchased and are available for study.

* * *

In summary, by focusing on improving its functioning in Portfolio, Program and Project Management, using the well-regarded PMI approach, OGCIO will be able to increase its effectiveness in the short and long term, and increase its ability to contribute to a “healthy, wealthy and educated Vanuatu.”

#end#