

# **PRiSM Practitioner**

Projects integrating Sustainable Methods





Evolving the Discipline of Project Management



#### **Course Instructor**









#### Course Kit

#### You will be provided with:

- A One year Membership to the GPM to have access to:
  - The GPM Reference Guide to Sustainability in Project Management eBook
  - The Sustainability Calculator and other PM Templates
  - USE CODE XXXXXX (replace x by code)

#### And at the End of this course:

- A certificate of completion
- PDUs or Professional Development Units are granted to the attendees completing the course.
- The GPM-b Certification for those who pass the exam.









## Learning Objectives



- Sustainability as a Differentiator
- Reporting Frameworks
- ISO Standards
- Define what Sustainability in Project Management or "Green Project Management" is
- Define the differences between a green project and standard project management
- Understand the sustainability integrators to PMI PMBOK<sup>®</sup> Knowledge Areas.
- Sustainability and Project Governance
- The PRiSM Methodology
- Define P5, the five bottom lines of sustainability and project management.
- Exercise 1 Learning How to Use P5
- Understand how to develop a sustainability management plan
- Exercise 2. Learning how to develop a Sustainability Management Plan (SMP)
- Exercise 3. Applying Sustainability to a Project





#### Introducing GPM





#### Evolving the Discipline of Project Management

#### Training Development and Standards

#### Certification and Governance







## Active in over 100 countries and growing

(Not to be confused with the German Project Management Association)



GPM is the largest sustainability training organization in the world.

(The only Sustainable Project Management Organization.)





Evolving the Discipline of Project Management



#### **Our Focus**

## Certification

- o GPM-b
- o GPM
- o GPM-m
- Methodology
  - o PRiSM

#### • Training

- PRiSM Courses
- SP2
- o SAPM









#### **GPM Certifications**





#### The GPM-b - Knowledge based foundational Certification



The GPM<sup>®</sup> - Proficiency based Practitioner Level Certification



The GPM-m - Proficiency Based Master Level Certification







### Certification



#### This course will prepare you for the GPM-b Certification.

- The Certification Exam Format
- To earn the Green Project Manager level B (GPM-b) credential, candidates must have 2,000 hours of project experience, and pass the 150 multiple choice question examination with a minimum passing score of 75%. The Exam is broken down into two primary sections as listed below.
- 0

#### 1. Project Management

- o 1.1. Project Management Standards based on ISO 21500
- 1.2. Project Management Competencies
- o 1.3. Project management Knowledge Areas
- 1.4. Key Terms and Concepts
- 0

#### 2. Sustainability Integration

- o 2.1. Why Sustainability
- 2.2. PRiSM<sup>™</sup>
- o 2.2.1. P5™
- o 2.2.2. Sustainability Management Planning
- 2.2.3. Phases, inputs and outputs
- 2.3. Sustainability ISOs
- 2.3.1. The Energy Management Standard ISO 50001
- o 2.3.2. The Environmental Management Standard ISO 14001
- o 2.3.3. The Guidance on Social Responsibility ISO 26000
- o 2.3.4. The Quality Management Standard ISO 9001

## This course will prepare you for the IPMA Level D Certification



#### Ask your Trainer for details on how you can earn your Certification!





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Registro No. SP.13.RTC.001

PMA" Training

Registered

Course

#### Industry Recognition



Phase One – Pre-Project/Initiation

## IPMA"

international project management association









## Achievement Award Winner Community Service / Development Project "Applying Sustainable Principles to Project Delivery"

Version 2.1 CGPM#2009-2012

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#### Award Yourself and/or a Colleague!



- Project of the Year
  - Gold and Silver
- Sustainability Award
- Fundamentals Award



The GPM<sup>®</sup> Fundamentals Award is bestowed upon the person who submits the most thorough EnVex in a PRiSM Practitioner course in a given year.

EnVexes are in-course-virtual-projects that are taken from real life case studies. These exercises challenge course participants to apply what they learn in the course to achieve project objectives while realizing benefits from a social, environmental, and economic standpoint.

2013 Award Winner – Anna Wang – Volkswagen Financial Services







### Agents of Change















Getting up to Speed

## **SUSTAINABILITY**







## **Corporate Social Responsibility (CSR)** - The corporate belief that a company needs to be responsible for its actions – <u>socially, ethically, and environmentally.</u>

## **Sustainable Development** – Development that meets the needs of the present without compromising future generations from meeting their own needs

Our Common Future, also known as the Brundtland Report, from the United Nations World Commission on Environment and Development (WCED) was published in 1987.

**ISO (International Organization for Standardization)** - The world's largest developer of voluntary International Standards. Founded in 1947, ISO has published more than 19,500 International Standards covering almost all aspects of technology and business.





#### Terms and Definitions used:

- Sustainability
- Sustainability Reporting
- Social Responsibility
- Social Sustainability
- Economic Sustainability
- Environmental Sustainability
- •UN Global Compact
- •Triple Bottom Line
- •P5 Concept
- •PESTLE
- Sustainability Management Plan
- Energy Management Systems

- •ISO 21500
- •ISO 14001
- •ISO 26000
- •ISO 50001
- •ISO 9001
- •Primary Energy
- Secondary Energy
- Quality
- Environment
- Occupational Health and Safety







#### Terms to know



#### **Climate Change**

"Change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity" (According to Intergovernmental Panel on Climate Change – *IPCC*)

"Change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods" (*According to United Nations Framework Convention on Climate Change UNFCCC*)





### Sustainability - Global Concerns



- Sustainable Development
- Climate Change
- > Ethics
- > Social Responsibility
- Supply Chains













### A Project

Consists of a unique set of processes consisting of coordinated and controlled activities with start and end dates, performed to achieve project objectives. Achievement of the project objectives requires the provision of deliverables conforming to specific requirements.

Although many projects may be similar, each project is unique. Project differences may occur in the following:

- deliverables provided;
- stakeholders influencing;
- resources used;
- constraints;
- the way processes are tailored to provide the deliverables.











#### What is Sustainable or "Green" Project Management?





## Which of these images represent Green Project Management? Is sustainable or green project management:



**A**. The management of a "green" initiative such as the solar panels or the car?

**B.** The integration of sustainable methods with project delivery to achieve a complete

sustainable outcome?









## Sustainability In Project Management

#### Sustainability is about...

- ...balancing or harmonizing social, environmental and economical interests
- ...both the short term and the long term
- …local and global
- …consuming income, not capital
- …transparency and accountability
- ...personal values and ethics



Projects integrating Sustainable Methods

(Silvius & Schipper 2011) Highly Recommended!





# What is Corporate Social Responsibility?



- Contributes to sustainable development, including health
   & welfare of society
- Takes into account expectations of stakeholders
- Is in compliance with applicable law and consistent with international norms of behavior
- Is integrated throughout and practiced in an organization's relationships





Why do we need a Guidance on Corporate Social Responsibility?



# The perception & reality of an organization's Social Responsibility performance can influence:

- Competitive Advantage
- Reputation
- Ability to attract and retain workers or members, customers, clients or users
- Employee morale, Commitment and Productivity
- View of Investors, Donors, Sponsors and Financial Community
- Relationship with Companies, Governments, Media, Suppliers, Peers, Customers and the Community in which it operates.





#### **Phases of Sustainability**





(The next sustainability wave, 2005, Bob Willard)









Realization: Business leaders recognize the Profit is required to sustain business.

- CSR POV: CSR is a cost and serves no useful purpose to increase profitability and does not add to shareholder value.
- CSR Risk: Government regulation means the business must be in "compliance".
- CSR Threat: There is risk that competitors that practice CSR may gain competitive advantage.
- CSR Opportunity: Fake Social Responsibility marketing efforts.





## CSR Stage 2 Business embraces CSR



Realization: People and Planet sustainability is required to sustain Profit in the business. Exploiting the environment will result in loss of necessary resources for the business. Exploiting people will result in less customers.

- CSR POV: CSR increases profitability because it grows the supply chain and ensures enough customers.
- CSR Risk: The holistic view of environmental and social sustainability leading to sustainable business is difficult to measure. Business needs to improve outcome measurements.
- CSR Threat: CSR arms race develops. Large enterprises can leverage high profits for philanthropy. On the other hand, marketing noise can make it difficult for buyers to know the difference between real and fake CSR.
- CSR Opportunity: People prefer to buy from ethical businesses.





## CSR Stage 3 For Profit Social Enterprise (FOPSE)



Realization: Profit drives innovation

- CSR POV: Profit can be a more effective feedback loop for success in solving social or environmental issues. FOPSE may be more effective than the non-profit model for solving some issues.
- CSR Risk: FOPSE requires questioning traditional business models. (In this case, BP must not only be "beyond petroleum" but petroleum free.) FOPSE companies compete against mainstream organizations with well-understood value propositions.
- CSR Threat: FOPSEs tend to be smaller businesses competing against very large companies. Those larger companies, especially those with real CSR initiatives, can out market FOPSEs.
- CSR Opportunity: FOPSE is disruptive and can create sustainable competitive advantage.



#### CSR New style



Where should organizations be spending their CSR resources?







#### **Corporate Responsibility**



## To: Good

- Sustainability as a strategy
- Products that make our clients more sustainable

#### From: Less Bad

- Less poluting resources
- Better isolated buildings
- Better safety clothing



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of Project Management







Evolving the Discipline of Project Management



## RIO +20 Anyone hear about this?



#### In section 46 it states:

"We acknowledge that the implementation of sustainable development will depend on active engagement of both the public and private sectors. We recognize that the active participation of the private sector can contribute to the achievement of sustainable development, including through the important tool of public-private partnerships. We support national regulatory and policy frameworks that enable business and industry to advance sustainable development initiatives taking into account the importance of corporate social responsibility. We call on the private sector to engage in responsible business practices, such as those promoted by the UN Global Compact."



#### **AIREADY EXISTING ISO**

**STANDARDS!** 



# Since the RIO Declaration in 1992, conditions have not changed.















# **2012:** International Year of Sustainable Energy for All

Launched by United Nations

"It is the golden thread that connects economic growth, increased social equity and preserving the environment."





#### THE ACCENTURE – UNGC 2013 REPORT





Source: UNGC-Accenture CEO Study 2013, based on 1,000 completed responses.

Survey result of **1,000** global CEOs, from **27** industries across **103** countries

93% of CEOs regard Sustainability as the new key for business success



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#### The Accenture – UNGC 2013 Report



...reveals that business leaders **are not satisfied** with business progress in tackling global sustainability challenges.



32% of CEOs believe that the global economy is on track to meet the demands of a growing population **33%** report that business is making sufficient efforts to address global sustainability challenges 83% of CEOs believe that government policymaking and regulation will be critical to progress




# The Accenture – UNGC 2013 Report (Cont) **Projects integrating Sustainable Methods**









#### What the view of the problem is



#### address sustainability challenges 5% 30% 33% To what extent do you agree with the following statement: business as a whole is making sufficient efforts to address global sustainability challenges 29%

Figure 2: CEOs do not believe that business is doing enough to

Figure 1: CEOs do not believe that the global economy is on track to meet the needs of a growing population within planetary boundaries



Source: UNGC-Accenture CEO Study 2013, based on 1,000 completed responses.

Disagree

Strongly disagree



Strongly agree

Neither agree nor disagree

Agree



### Global Reporting Initiative (GRI)



Pioneering nonprofit propose a framework for sustainability reporting.

Companies use this report to inform its shareholders and consumers through their performance of economic, social and environmental

Learn more at www.globalreporting.org









#### **GRI** Categories and Aspects



# Economic

- •Economic Performance
- Market Presence
- Direct Economic impact

### Environment

- •Materials, energy, water
- biodiversity
- Emissions, waste, transport
- Products and services
- Integral sustainability

### Social

- •Labor practices and decent work
- Society
- •Human Rights
- Product liability
- Ethics







#### Going Deeper into 2013 G4 GRI

PRSM Jects integrating Sustainable Methods

#### TABLE 1: CATEGORIES AND ASPECTS IN THE GUIDELINES

TABLE I: CAT	EGORIES AND ASPECTS IN T	HE GUIDELINES			
Category	Economic		Environmental		
Aspects II	Economic Performance		Materials		
	<ul> <li>Market Presence</li> </ul>		Energy		
	<ul> <li>Indirect Economic Impac</li> </ul>	ts	Water		
	<ul> <li>Procurement Practices</li> </ul>		<ul> <li>Biodiversity</li> </ul>		
			<ul> <li>Emissions</li> </ul>		
			<ul> <li>Effluents and Waste</li> </ul>		
			<ul> <li>Products and Services</li> </ul>		
			<ul> <li>Compliance</li> </ul>		
			<ul> <li>Transport</li> </ul>		
			Overall		
			<ul> <li>Supplier Environmental Assessment</li> </ul>		
			Environmental Grievance	e Mechanisms	
Category	Social				
Sub-	Labor Practices and	Human Rights	Society	Product Responsibility	
Categories	Decent Work				
Aspects <sup>III</sup>	<ul> <li>Employment</li> </ul>	Investment	<ul> <li>Local Communities</li> </ul>	Customer Health and	
	<ul> <li>Labor/Management</li> </ul>	<ul> <li>Non-discrimination</li> </ul>	<ul> <li>Anti-corruption</li> </ul>	Safety	
	Relations	<ul> <li>Freedom of Association</li> </ul>	<ul> <li>Public Policy</li> </ul>	<ul> <li>Product and Service</li> </ul>	
	<ul> <li>Occupational Health</li> </ul>	and Collective	<ul> <li>Anti-competitive</li> </ul>	Labeling	
	and Safety	Bargaining	Behavior	<ul> <li>Marketing</li> </ul>	
	<ul> <li>Training and Education</li> </ul>	<ul> <li>Child Labor</li> </ul>	<ul> <li>Compliance</li> </ul>	Communications	
	<ul> <li>Diversity and Equal</li> </ul>	<ul> <li>Forced or Compulsory</li> </ul>	<ul> <li>Supplier Assessment for</li> </ul>		
	Opportunity	Labor	Impacts on Society	<ul> <li>Compliance</li> </ul>	
	<ul> <li>Equal Remuneration for Women and Men</li> </ul>	<ul> <li>Security Practices</li> <li>Indigenous Rights</li> </ul>	<ul> <li>Grievance Mechanisms for Impacts on Society</li> </ul>		
	Supplier Assessment for     Assessment		for impacts on society		
	Labor Practices	Supplier Human Rights			
		Assessment			
	<ul> <li>Labor Practices</li> </ul>				
	<ul> <li>Labor Practices</li> <li>Grievance Mechanisms</li> </ul>	Human Rights			



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### The United Nations Global Compact



#### The Ten Principles

The UN Global Compact's ten principles in the areas of human rights, labour, the environment and anti-corruption enjoy universal consensus and are derived from:

- The Universal Declaration of Human Rights
- The International Labour Organization's Declaration on Fundamental Principles and Rights at Work
- The Rio Declaration on Environment and Development
- The United Nations Convention Against Corruption

ALCIOBAL COMPCT

WE SUPPORT

GPM Global is a contributor to the UN Global Compact and can be found on their registry







### The Ten Principles





#### **Human Rights**

- 1. Businesses should support and respect the protection of internationally proclaimed human rights; and
- 2. make sure that they are not complicit in human rights abuses.

#### Labour

- 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining:
- the effective recognition of the right to collective bargaining;
- 4. the elimination of all forms of forced and compulsory labour;
- 5. the effective abolition of child labour; and
- 6. the elimination of discrimination in respect of employment and occupation.





#### The Ten Principles



United Nations Global Compact



#### Environment

7. Businesses should support a precautionary approach to environmental challenges;

- 8. undertake initiatives to promote greater environmental responsibility; and
- 9. encourage the development and diffusion of environmentally friendly technologies.

#### Anti-Corruption

10. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced and compulsory labour; the effective abolition of child labour; and the elimination of discrimination in respect of employment and occupation.





#### **Millennium Development Goals**



### The Eight Millennium Development Goals









#### Explaining a Need for a Paradigm Shift



Each of these building blocks must be further strengthened and connected through a comprehensive and collective effort.



UN Secretary Ban Ki-Moon outlining the Architecture on September 19th





# POST-2015 BUSINESS ENGAGEMENT ARCHITECTURE



The Post-2015 Business Engagement Architecture illustrates the main building blocks necessary to enhance corporate sustainability as an effective contribution to sustainable development, creating value for both business and society. Each of these building blocks must be further strengthened and connected through a comprehensive and collective effort if they are to help take corporate sustainability to scale and turn business into a truly transformative force in the Post-2015 era. Individual companies, corporate sustainability organizations, Governments, investors, business schools, civil society, labour and consumers all have a role to play in scaling up business action, and should be able to identify those areas in which they need to do more.

#### **DRIVERS AND INCENTIVES**

The "business case" for corporate action on sustainability issues has been significantly strengthened over the last decade, driven by very important developments in a number of areas. These include the strengthening of society-based drivers, reflecting changing norms and expectations for responsible business transmitted through community groups, Governments and business education initiatives, for example. Similarly, market-based drivers have been strengthened as sustainability increasing ju impacts a company's ability to attract and retain customers, investors, employees and business partners. A new global development agenda provides opportunities to further enhance the interplay of drivers that are fostering enlightened business leaders genuinely motivated to formulate and implement new-era corporate sustainability strategies.

#### CORPORATE SUSTAINABILITY

Central to the Architecture is a new corporate sustainability philosophy and orientation rooted in three dimensions – i) respecting universal principles; ii) taking action to support broader UN goals; and iii) engaging in partnerships and collective action at the global and local levels. Maximizing the business performance in these three domains will require a level of corporate leadership and governance not yet realized. This new global orientation for business also encompasses an expanded definition of corporate sustainability to mean a company's delivery of long-term value in economic, social, environmental and ethical terms.



#### SUSTAINABLE DEVELOPMENT GOALS AND LONG-TERM BUSINESS GOALS

Businesses contribute to the advancement of sustainable development goals by implementing corporate sustainability strategies that advance inclusive economic growth, social equity and progress, and environmental protection. Those same strategies and practices are increasingly understood to contribute to revenue growth, resource productivity and the mitigation of operational, legal and reputational risks. Consequently, businesses that integrate sustainability into their strategies and operations are increasingly finding themselves in positions of long-term strength. Enhancing this understanding of the overlap between public and private interests is key to motivating more companies to engage and take action.

#### TRANSPARENCY AND ACCOUNTABILITY

Building on more than a decade of experience of engaging business around UN priorities, it is clear that the Architecture must incorporate a set of robust accountability measures in order to make business commitments transparent and to ensure that progress towards them is real. The availability of public repositories for commitments, relevant standards and certification schemes, and appropriate reporting mechanisms will be important in order to transparently and accurately track progress.

#### PROGRESS REVIEW

To keep the Architecture dynamic and relevant, it will be important to periodically review the achievements made by the business community, identify gaps and redefine priorities and strategies with respect to all the main building blocks.

#### PLATFORMS FOR ACTION AND PARTNERSHIP

An especially promising component of the Architecture is the Platforms for Action and Partnership, which can help optimize and scale up corporate sustainability efforts as well as contribute to corporate participation in the broader multi-stakeholder efforts to achieve UN goals. These supporting elements include various forums and platforms that enable companies and other stakeholders to work together – by geography, sector and/or issue. Such initiatives are key to facilitating the type of partnerships and collective action without which systemic challenges cannot be overcome. Country-level sustainability networks and initiatives, are growing rapidly (the UN Global Compact now counts 100 such Local Networks and 65 WBCSD Regional Networks exist), offering compelling engagement opportunities and facilitating collective action at the local level where many sustainability challenges play out.









### What Companies are Being asked to do:



• Respect the universal principles of the UN Global Compact – over and above minimum regulator requirements in countries of operation – and make a public commitment to do so;

 Maintain ongoing and inclusive dialogue with stakeholders and experts to identify, prevent, mitigate and account for sustainability

**impacts** to society and environment from business activities;

- Align business strategies, models and R&D priorities with global sustainability responsibilities and set targets to support the achievement of specific sustainable development goals;
- Integrate sustainability into governance mechanisms and corporate culture, creating the right incentives for management and employees to make the company more sustainable;
- Report on progress to stakeholders in an open and transparent manner and integrate sustainability information into communication with customers and investors, applying relevant reporting standards such as the Global Reporting Initiative, respected measurement and certification schemes;





#### Continued



- Leverage channels to communicate corporate sustainability performance to investors and, where relevant, adopt a responsible investment policy for corporate pension funds;
- Undertake sustainability due-diligence and set clear expectations before signing

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up		U	IN						

-MAKE THE WORLD A BETTER PLACE
 -GROW YOUR BUSINESS

appropriate;

 Engage in partnerships with other businesses and stakeholders that can have transformative impacts – moving beyond an ad-hoc project focus.







#### Areas of Focus





Source: Global Compact LEAD consultations





### About the Architecture

The Post-2015 Business Engagement Architecture illustrates the main

building blocks necessary to enhance corporate sustainability as an effective contribution to sustainable development, creating value for both business and society.

Each of these building blocks must be further strengthened and connected through a comprehensive and collective effort if they are to help take corporate sustainability to scale and turn business into a truly transformative force in the Post-2015 era.





UN Secretary Ban Ki-Moon Outlining the Architecture on September 19th





### The big disconnect



This year, unique insights from CEOs, supported by analysis from Accenture's High-Performance Business research, have identified seven themes that are enabling leading companies to achieve both value creation and impact on global sustainability challenges.

#### 1 Realism & context:

Understanding the scale of the challenge—and the opportunity

#### 2 Growth & differentiation:

Turning sustainability to advantage and value creation

#### **3** Partnerships & collaboration:

New challenges, new solutions

#### 4 Value & performance:

"What gets measured gets managed"

**5 Technology & innovation:** New models for success

**6 Engagement & dialogue:** Broadening the conversation

**7 Advocacy & leadership:** Shaping future systems



Evolving the Discipline of Project Management Keep in mind these 7 key themes for Sustainability







### Getting to Know ISO Standards





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#### Guidelines

ISO 26000 - CSR

ISO 21500 – Project Management

#### **Normative Standards**

ISO 9000 – Quality Management ISO 14000 - Environmental ISO 50001- Energy Management





#### What ISO 26000 is NOT...



- A management system standard.
- Intended or appropriate for certification purposes or regulatory or contractual use.
- Intended to provide a basis for legal actions, complaints, defenses or other claims in any international, domestic or other proceeding.
- Intended to be cited as evidence of the evolution of customary international law.
- Intended to prevent the development of national standards that are more specific, more demanding, or of a different type.







### What ISO 26000 is...

PRISM Projects integrating Sustainable Methods

- Intended to assist organizations in contributing to Sustainable Development.
- Intended to promote common understanding in the field of Social Responsibility.
- Intended to complement other instruments & initiatives for Social Responsibility *and* not to replace them.
- Intended to provide organizations with guidance concerning Social Responsibility and can be used as part of public policy activities.







### ISO 26000 Principles of Social Responsibility

- Accountability
  - Businesses are expected to be accountable for its impacts on society & the environment
- Transparency
  - Businesses are expected to be transparent in its decisions & activities that impact on society & the environment.
- Ethical Behavior
  - Businesses are expected to behave ethically at all times.
- Stakeholder Interests
  - Businesses are expected respect, consider & respond to the interests of its stakeholders.
- Rule of Law
  - Businesses are expected to abide by the rule of law for that region and or country.
- International Norms of Behavior
  - Businesses are expected to respect international norms of behavior, while adhering to the principle of respect for the rule of law.









### ISO 14000 Family

- A series of guidance documents and standards to help organizations address environmental issues.
- These ISO's below deal with Environmental Management Systems (EMS)
  - 14001: Environmental Management Systems
  - 14004: EMS general guidelines
  - 14010: Guidelines for Environmental Auditing
  - 14011: Guidelines for Auditing of an EMS
  - 14012: Auditing Qualification criteria
  - 14064: Greenhouse gases









#### What is the Environment?



 Environment: Surroundings in which an organization operates, including air, water, soil, natural resources, flora, fauna, humans and their interrelation. (ISO 14001:2004)







### ISO 14001 Key Elements

- Policy Statement
- Identification of Significant Environmental Impacts and Environmental Legal Requirements
- Establishing Environmental Programs, Objectives and Targets
- o Emergency Plan
- Operating Control to meet the Environmental Objectives and Targets
- Human Resources roles and Responsibilities.
- Training.
- Communication
- Internal Assessments. Corrective actions.
- Management Review (by Directors)









#### What is an EMS?



- Systematic way of managing an organization's environmental affairs
- Based on Plan-Do-Check-Act Model (PDCA)
- Focused on Continual Improvement of system
- Addresses immediate and long-term impact of an organization's products, services and processes on the environment.
- A tool to improve environmental performance







#### What is an EMS?



#### **Deming Model - PDCA**







# Why Do Organizations Implement an EMS PRÍS

- Helps to identify the causes of environmental problems.
  - better to make a product right the first time
  - o cheaper to prevent a spill or other accident
  - cost effective to prevent pollution
- Trade and competitive issues



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- Inconsistency in environmental regulation and enforcement
- Many individual parts may already be in place just need to unify under the EMS umbrella!

#### ??Why should a project manager be familiar with the EMS?





# ISO 50001: 2011 Energy Management Systems



ISO 50001 gives organizations the requirements for energy management systems (EnMS)

- Provides a framework for
  - ✓ Industrial plants
  - ✓ Commercial
  - ✓ Institutional and governmental facilities
  - $\checkmark$  Entire organizations to manage energy







# ISO 50001: 2011 Energy Management Systems

#### ISO 50001 — Why is it important ?

1. Improved energy performance can provide rapid benefits for an organization by maximizing the use of its energy sources and energy-related assets, thus reducing both energy cost and consumption.

2. The organization will also make positive contributions toward reducing depletion of energy resources and mitigating worldwide effects of energy use, such as global warming.



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# ISO 50001: 2011 Energy Management Systems



#### Primary Energy Sources

- ✓ Renewable: Solar, Water, Wind, Biomass
- Non-Renewable: Oil, Gas, Carbon and Nuclear fusion

#### Secondary Energy

✓ Electric, mechanic, Thermic, Hot water,

Compressed Air, Biodiesel and Fuel in general

#### • Final Use

✓ Lighting, Refrigeration, Heating, Process,







#### **Principles of Quality Management**

These principles embodied in ISO 9001 have been developed with the intention that management can lead the organization towards improved performance.

- Customer Focus
- leadership
- Involvement of people
- Process Approach
- System approach to management
- continuous Improvement
- Factual approach to decision making
- Mutually beneficial supplier





Projects integrating Sustainable Methods ith the mproved



#### Constraints to Quality









### **Internal Audits**

# Projects integrating Sustainable Methods

#### Definitions (ISO 9000:2005)

"A systematic, independent and documented process for obtaining audit evidence of

 <u>Audit Evidence</u>: Records, statements of fact or other information relevant to the audit criteria and verifiable

... And evaluating it objectively to determine the extent to which they meet the criteria for audit " Audit Criteria: A set of policies, procedures or requirements.

(They are used as a benchmark against which we compare the evidence of the audit)







### **Internal Audits**



#### Audit Principles

- Ethical conduct: trust, integrity, confidentiality, and discretion.
- Fair Presentation: report truthfully and accurately
- Professional Care: Application of the audit. Necessary competence.
- Independence: the basis for the impartiality and objectivity of the conclusions.







#### **Internal Audits**

#### Who in the room likes Audits?

- That process has been operating as planned: sequence of activities, conformity procedures, operational control.
- That critical resources of each of the processes are under control: HR, environment, equipment.
- That the documents of each of the processes are under control: management manual, procedures, instructive records.
- Processes that are under control and produce the expected results: process indicators, monitoring and control, control variables. Corrective and preventive actions.
- Processes are being improved and will reach planned objectives: objectives and policy, plan management, monitoring and review













# DIVING IN TO PROJECT MANAGEMENT




## **Key Terms**



**The Project Environment:** A project usually exists inside a larger organization encompassing other activities. In such cases, there are relationships between the project and its environment, business planning and operations. Pre-project and post-project activities may include activities such as business case development, conducting feasibility studies and transition to operations. Projects may be organized within programmes and project portfolios. Figure 3 illustrates these relationships.

**Project Portfolio** - A project portfolio is generally a collection of projects and programmes and other work that are grouped together to facilitate the effective management of that work to meet strategic goals.





# The relationship Between Project Management and organizational Strategy



Organizational strategy should provide guidance and direction to project management—especially when one considers that projects exist to support organizational strategies. Often it is the project sponsor or the portfolio or program manager who identifies alignment or potential conflicts between organizational strategies and project goals and then communicates these to the project manager.

If the goals of a project are in conflict with an established organizational strategy, it is incumbent upon the project manager to document and identify such conflicts as early as possible in the project. At times, the development of an organizational strategy could be the goal of a project rather than a guiding principle. In such a case, it is important for the project to specifically define what constitutes an appropriate organizational strategy that will sustain the organization.

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Q. If Projects are central to how a company constructs, implements, and delivers products (or change), and companies are changing to adopt sustainability as part of corporate strategy, why aren't project managers using sustainability as a performance criteria?

A. No one has developed a repeatable process to accommodate it.











"The further development of the project management profession requires project managers to take responsibility for sustainability".



Mary McKinlay Former IPMA Vice President

IPMA World Congress 2008 Keynote









## What is the difference between "sustainable development" and "sustainable delivery"?





### The New ISO for Project Management





# ISO 21500:2012 provides high-level description of concepts and processes that are considered to form good practice in project management.

- Projects are placed in the context of programmes and project portfolios.
- The ISO does not provide detailed guidance on the management of programmes and project portfolios.
- Topics pertaining to general management are addressed only within the context of project management.
- □ The ISO is 36 pages and was developed over the course of five years
- □ The Project Management Institute served as secretariat of the ISO committee









ISO 1400 Series

- o ISO 26000
- ISO 50001
- ISO 9001
- o ISO 21500





## Common Challenges to Sustainability in Project Management



- Managing in an Integrated Manner while involving all stakeholders
- Aligning Social Responsibility with Corporate Strategy
- Rationalizing harmony with economic, compliance, and ethical responsibility
- Managing Risk to Brand and Reputation
- Integrating Eco-Design into Product and Service Offerings







## **Challenges to Project Managers**



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- The misconception of added steps (increased workload)
- Proving the value
- Established standards
- Lack of consistent and repeatable processes
- Lack of Governance
- Lack of tools





## How about this challenge?











## Project Management Institute's Take



# PMI'S PULSE OF THE PROFESSION

Driving Success in Challenging Times

Despite tight economic conditions, organizations have been and will continue to increase their focus on benefits realization (in addition to cost and time) as a project and program success metric. Research conducted with senior project management leaders on PMI's <u>Global Executive</u> <u>Council</u> found that the most important skill for managing today's complex projects and programs is the ability of the team to the vision of the project and design the project's organizational structure to be and project objectives. This more strategic view of the project helps maintain a debenefit the project was meant to deliver. Likewise, the portfolio managers of the standard for Portfolio Management rated value capture/be

<u>Council</u> found that the most important skill for managing today's complex projects and programs is the ability to align the team to the vision of the project and design the project's organizational structure to align people and project objectives. This more strategic view of the project helps maintain a focus on the intended benefit the project was meant to deliver. Likewise, the portfolio

strategic n

SRC: http://www.pmi.org/~/media/PDF/Research/2012\_Pulse\_of\_the\_profession.ashx





### According to PMI'S Pulse of the Profession



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### The Risks of Undervaluing Project Management

Projects and programs drive change in organizations. When they fail, organizations lose money and marketshare, and they become less likely to execute their strategies and squander competitive advantage. With stakes this high, projects, programs and especially the portfolio cannot be left to chance. They need to be managed by skilled, trained professionals in a standardized way throughout an organization and align with organizational strategy to ensure success.

The third global survey on the current state of project management conducted by PricewaterhouseCoopers LLC (PwC) in 2012 revealed that as many as 97 percent of respondents believe project management is critical to business performance and organizational success, and 94 percent believe project management enables business growth.

However, this year's Pulse of the Profession™ finds that organizations undervalue project management and put inadequate focus on talent development. Only about half of respondents (54 percent) say their organizations fully understand the value of project management. Although this year's Pulse demonstrates

the strategic imperative of mature project management, this competency often lacks representation at the highest levels, with only six percent of organizations having a project management-related role at the C-level.

Perhaps as a result of this undervaluing of project, program and portfolio management, project success rates are declining. This suggests that organizations must mature their project, program and portfolio practices to reverse this trend and promote success across the organization. Since 2008, the percentage of projects that project managers say have met their original goals and business intent has declined 10 percentage points (from 72 percent in 2008 to 62 percent in 2012).

Declining project success rates have ramifications that extend beyond the scope of any individual project. When project timelines are not met, when budgets are exceeded or when intended project goals are not fulfilled, unintended demands are placed on other resources—people, projects, products, budgets and overall organizational goals. This boils down to wasted money that an organization can never get back (see Figure 1).





### **1.5.2.2 The Link Between Project Management and Organizational Governance**

Projects (and programs) are undertaken to achieve strategic business outcomes, for which many organizations now adopt formal organizational governance processes and procedures. Organizational governance criteria can impose constraints on projects—particularly if the project delivers a service which will be subject to strict organizational governance.

Because project success may be judged on the basis of how well the resultant product or service supports organizational governance, it is important for the project manager to be knowledgeable about corporate/ organizational governance policies and procedures pertaining to the subject matter of the product or service (e.g., if an organization has adopted policies in support of sustainability practices and the project involves construction of a new office building, the project manager should be aware of sustainability requirements related to building construction.)





## The Project Environment



### **External Environment**



of Project Management

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## Organizational Strategy – Projects -Operations



### • The organizational strategy identifies opportunities.

 The opportunities are evaluated and should be documented. Selected opportunities are further developed in a business case or other similar document, and can result in one or more projects that provide deliverables. Those deliverables can be used to realize benefits. The benefits can be an input to realizing and further developing the organizational strategy.

### • Projects.

 performed by temporary teams, are non-repetitive and provide unique deliverables.

### • Operations.

 performed by relatively stable teams through ongoing and repetitive processes and are focused on sustaining the organization;







Global Sustainability Community of Practice

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## **Project Governance**



- Governance is the framework by which an organization is directed and controlled. Project governance includes, but is not limited to, those areas of organizational governance that are specifically related to project activities.
- Project governance may include subjects such as the following:
  - $\circ$  defining the management structure;
  - $\circ$  the policies, processes and methodologies to be used;
  - — limits of authority for decision-making;
  - — stakeholder responsibilities and accountabilities;
  - $\circ$  interactions such as reporting and the escalation of issues or risks.
- The responsibility for maintaining the appropriate governance of a project is usually assigned either to the project sponsor or to a project steering committee.





### **Project Management**









# Relationship between project management concepts and processes



- **1. Project management** is accomplished through processes utilizing the concepts [knowledge] and application [competencies.]
- **2. A process** is a set of interrelated activities. Processes used in projects are generally categorized into three major types.
  - project management processes -- specific to project management and determine how the activities selected for the project are managed
  - **2. delivery processes** -- not unique to project management, result in the specification and
  - **3.** provision of a particular product, service, or result and vary depending on the particular project
- 3. Deliverable support processes -- not unique to project management, provide relevant and valuable support to product and project management processes in such disciplines as logistics, finance, accounting and safety





## Challenges to Sustainability in Project Management



- Managing in an Integrated Manner while involving all stakeholders
- Aligning Social Responsibility with Corporate Strategy
- Rationalising harmony with economy, compliance, and ethical responsibility
- Managing Risk to Brand and Reputation
- Integrating Eco-Design into Product and Service Offerings







## Sustainability at the Program Level



- Improved resourcing leads to less waste
- Linking and connecting projects can bring greater efficiencies
- Risks and Issues are managed at the right level and can in some cases be curtailed prior to occurrence
- Connection with "business as usual" means that sustainability message doesn't get restricted to project with a clearer route for communication



















### Support to Projects

# **PROJECT SPONSORS**





### **Project Sponsor Roles**



- Own, Develop and Maintain Business Case
- Monitor Project Environment for Risks and Communicate to Project Manager and External Stakeholders
- Review the viability of a Project against Critical Success Criteria at Stage and Phase Gates





**Project Sponsor Roles** 



- Acceptance of Project Deliverables at Handover and Project Sign Off
- Conduct Benefits realization Reviews









What defines Success?

# PROJECT SUCCESS AND BENEFITS MANAGEMENT









Evolving the Discipline of Project Management







### **Success Factors**



- Senior management support
- Clearly defined goals
- Good communications
- Team motivation
- Strong leadership
- Supports the direction of the organization
- Does No Harm.. (Financial, Environmental, Social)





## The 2022 World Cup Stadium Project



Dozens of Nepalese migrant laborers have died in Qatar in recent weeks and thousands more are enduring appalling labor abuses, a Guardian investigation has found, raising serious questions about Qatar's preparations to host the 2022 World Cup.

According to documents obtained from the Nepalese embassy in Doha, at least 44 workers died between 4 June and 8 August.

More than half died of heart attacks, heart failure or workplace accidents.



Photo Courtesy of FIFA.com





## The 2022 World Cup



### The investigation by the Guardian reveals:

- Evidence of forced labour on a huge World Cup infrastructure project.
- Some Nepalese men have alleged that they have not been paid for months and have had their salaries retained to stop them running away.
- Some workers on other sites say employers routinely confiscate passports and refuse to issue ID cards, in effect reducing them to the status of illegal aliens.
- Some laborers say they have been denied access to free drinking water in the desert heat.
- About 30 Nepalese sought refuge at their embassy in Doha to escape the brutal conditions of their employment.

13	S.N	Name of the Deceased		Deccased in July 2013			
1		toning of the December	Escorting Person	Quari Riyal	Date of Death	Cause of Death	
	91		Amar Bahader Chale	12471.00	28/06/2011	A STATE AND A STAT	Date of NOC
3	12	X and a	Arjun Bishwokarma	5546.00	27.00.2013	Acute Cardiac Failure Sudden Cardiac Arrest	01.07.20
	13		Buddhi Bahadar Magar	14155.00	14.05.2013		01.07.20
0		And the st	Lok Bohadur Thapa Magar	4570.00	26.06.2013	Electrocution Sudden Cardiac Arrest	02.07.20
0:			Shailendra Kamar Sah	\$462.00	13.06.2013	Cranual Trauma due to RTA	07.07.20
0(			ftir Bahadur Dimbuog	3000.00	29.06.2013	Acute Cardiac Arrest	07.07.20
07			Prem Kumar Dhimal	2730.00	18.06.2913	Head injuries skull fracture cervical versebrae due to RTA	07.07.20
08			Chunchal Raghamshi	2750.00	18.06.2013	Head injuries fracture shall	08 07 70
			Satya Narayan Rajbanihi	2760.00	18.06.2013	Head injuries fracture skull due to RTA.	08.07.20
10		10 mm	Lok Nath Regmi	5879.00	07.07.2013	Sudden Cardiac Arrest	
8 11			Chandra Bahadur Yari	3479.00	24.06.2013	Multiple blass injuries due to fall from height during work.	09.07.20
A 12			Bij Bəhədur Lama	14380.00	02.07.2013	Severe bleeding due to traumatic crush injury	14.07.20
13			Braham Dev Mandal	3976.00	05.07.02013	Sudden Cardiac Arrest	
14			Man Bahadur Sapkota	2523.00	04.07.2013	Crushing of the head due to RTA	14.07.20
15			Jagat Bahadur Moktan	10185.00	14.07.2013	Sudden Cardiac Arrest	10.00.00
16		and the second se	Yaday Bahadur Khadka	6760.00	02.02.2015	ATTES	16.07.20

### Photo Courtesy of www.theguardian.com





## 2013 RANA Plaza Collapse – Many Projects Failed...







NEVER STOP EXPLORING





The Rana Plaza factory collapse in Bangladesh killed 1,132 garment workers and injured more than 2,500 in April





### Measuring Sustainable Success.

## PRISM Projects integrating Sustainable Methods

- Important to Trend
   Sustainable
   Impact
- Set Baselines
- View Projects as
  Cyclical
- Drive
  Sustainability
  Through
  Projects



#### Project Managemet Impact on the Triple Bottom Line using the P5 Method



This pie chart is derived from the impacts that the resulting product of a project and the project's processes have on the Triple Bottom Line (Social, Environmental, and Economic Sustainability).

To arrive at the percentage, each is broken down into sub categories (as shown below) and measured against both the Project's products and process to arrive at the impact percentage per bottom line.

Note: A negative number indicates positive impact (reducing negative impact), while a positive number represents a negative impact (increasing negative impact).

	People	Planet	Profit	
Profit	Labour practices & decent work Human Rights Society & Customers Ethical behaviour	Materials and Procurement Energy Transport Waste	Return on Investment Future Options Business Agility	

### Impacts By Category









### **Examples of Benefits**

- Increased market share
- Increased turnover and profit
- Greater output capacity
- larger product portfolio
- Improved security
- Increased staff satisfaction
- Higher Brand position
- Decrease in Carbon Footprint
- Cradle to Cradle Reporting



(Supply Chains)






#### The Interdependency of Key Performance Indicators is a simple concept.



**Budget miscalculations** = increased/decreased scope time



**Poor Timelines** = More Resources needed



**Undefined or Confusing Scope** = More Money & Time



**Unsustainable** = Causes Harm to the Environment and or Society





## **Understanding Organizational Goals**



- Project Managers must have an understanding of organizational goals beyond project objectives.
- Projects or deliverables that do not align with organizational goals need to be weighted for risk.
- Q. What are some ways to keep current?





PRSM Projects integrating Sustainable Methods

Let's review knowledge (subject) areas and see where sustainability fits in!











# Sustainability in Integration Management

**Integration Management-** includes the processes required to identify, define, combine, unify, coordinate, control and close the various activities and processes related to the project.









# Sustainability in Resource Management

**Resource Management-** Includes the processes required to manage finite resources effectively.









# Sustainability in Cost Management

**Cost Management:** the processes required to develop the budget and to monitor progress to control costs.









# Sustainability in Quality Management

**Quality Management:** the processes required to plan and establish quality assurance and control.





#### According to PMBOK<sup>®</sup> Guide – Fifth Edition



"Project Quality Management includes the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken. Project Quality Management uses policies and procedures to implement, within the project's context, the organization's quality management system and, as appropriate, it supports continuous process improvement activities as undertaken on behalf of the performing organization. **Project Quality Management works to ensure that the project requirements, including product requirements, are met and validated."** 

©2013 Project Management Institute. A Guide to the Project Management Body of Knowledge (PMBOK<sup>®</sup> Guide) – Fifth Edition Page **227** 









# Sustainability in Communications Management

**Communication Management:** The processes required to plan, manage and distribute information relevant to the project.









## Sustainability in Risk Management

**Risk Management:** processes required to identify and manage threats and opportunities.











# Sustainability in Procurement Management

**Procurement Management:** the processes required to plan and acquire products, services or results, and to manage supplier relationships.









# Sustainability in Time and Scope Management

**Time Management** - the processes required to schedule the project activities and to monitor progress to control the schedule.

**Scope Management** - he processes required to identify and define the work and deliverables, and only the work and deliverables required.









#### The Strength of PRiSM

The only project methodology that aligns with ISO 26000, 21500, 14001, 9000, 5001 the UNGC Ten Principles, and The GRI G4 Framework for Sustainability Reporting





## The PRiSM Pre Project/Initiation Phase







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### Purpose of Business Case



- Justification of the project
- To obtain authorization for the project and its funding
- $_{\odot}$  Used to give direction to a project team
- Baseline document for phase and stage reviews
- Used in evaluation of change requests
- Baseline document for benefits reviews
- Used by organization to facilitate lessons learned







#### Contents of Business Case



- Purpose
- Project Summary
- Business Objectives
- Project Objectives
- Benefits
- Deliverables
- o <u>Performance Indicators</u>
- Risks and Opportunities
- Market and Competition Conditions
- Organizational Constraints
- Project Sponsor
- Product Owner
- Project Control
- Resources
- Other Constraints





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Sustainability in the Business Case



**Best Practic** 

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- Should include references to:
  - Corporate Sustainability Governance
  - Regulatory Compliance
  - Goals and Objectives
  - Performance Indicators Using P5 (We will get to that)
- Project Managers should always review the Business Case or Charter from a CSR Perspective by leveling the deliverables against the EMS or with the CSR Officer.



## The PRiSM Pre Project/Initiation Phase









#### Leveling against the EMS









## Project Sustainability Impact Analysis









## The Triple Bottom Line and Project Management















#### P5 Overview



- Five measureable elements to sustainability
- Each measured individually and through Mutual Possession
  - Planet (Environmental aspect)
  - People (Social aspect)
  - Profit (Financial aspect)
  - Process (Governance aspect)
  - Product (Technical aspect)











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## What is a product?





A "product" defined to be any tangible or intangible service, good(s), change, resource, business result or outcome undertaken by an organization using the project management processes as the method to create, update, expand, maintain and eventually dispose of the products, with the objective to use the "product" to provide future benefit to the organization. "

#### Products commonly follow four stages

- Introduction A product is introduced to the market
- Growth the product starts to grow in the market
- Maturity the product is established, sales increase and eventually stabilize
- **Decline** the stage where the product begins to decline and either the market

for the product is no longer there.





#### What is a Project Process?





# According to ISO 21500, A process is a set of interrelated activities. Processes used in projects are generally categorized into three major types:

- Project management processes, which are specific to project management and determine how the activities selected for the project are managed;
- Delivery processes, which are not unique to project management, which result in the specification and provision of a particular product, service or result, and which vary depending on the particular project deliverable;
- Support processes, which are not unique to project management and which provide relevant and valuable support to product and project management processes in such disciplines as logistics, finance, accounting and safety.











#### **Labor Practices and Decent Work**

- Employment
- Labor Management Relations
- Health and Safety
- Training and Education
- Organizational Learning
- Diversity and Equal Opportunity
- Trained Professional Emigration











#### Society and Customers

- Community Support
- Public Policy/ Compliance
- Customer Health and Safety
- Products Labeling and Services Labeling
- Market Communications and Advertising
- Customer Privacy











#### Human Rights

- Non Discrimination
- Freedom of Association
- Child Labor
- Forced or Compulsory Behavior











#### **Ethical Behavior**

- Investment and Procurement Practices
- Bribery and Corruption
- Anti-Competitive Behavior











#### Transport

- Local Procurement
- Digital Communication
- Traveling











#### Energy

- Energy Used (Consumed) ٠
- Emission / Co2 ٠
- **Clean Energy Return** ٠











#### Water

- Water Quality ٠
- Water Quantity ٠
- Water Consumption ٠
- Water Displacement ٠











#### Waste

- Recycling
- Disposal
- Reusability
- Incorporated Energy
- Waste







## P5 and the Financial Bottom Line





#### Return on Investment

- Direct Financial Benefits
- Benefit Cost Ratio
- External Rate of Return
- Internal Rate of Return
- Net Present Value







## P5 and the Financial Bottom Line





#### **Business Agility**

- Flexibility / Optionality in the Project
- Increased Business Flexibility
- Economic Stimulation
- Local Economic Impact
- Indirect Benefits






# How to Perform the Analysis



- 1. There are several ways to perform a P5 impact analysis. Developing a risk register using each element, as a category is the simplest.
- 2. The most effective way is to use a scoring system.







# Example



 When using a scoring system, each product deliverable and project process will be scored against each element of P5 based on a positive/neutral/negative scale ranging from a neutral (o) high (+ or -3), medium (+ or -2), and low (+ or -3).

	Deliverable 1	Deliverable 2	Deliverable 3	Score
Carbon	+3 (high /negative)	+1 (low negative)	-2 (medium positive)	+2
Emissions				

 This method is a simplified Analytic Hierarchy Process, one of the most popular analytical techniques for complex decision-making problems. Note: An AHP hierarchy can have as many levels as needed to fully characterize a particular decision situation.















- The P5 impact analysis will provide key insight on where the problem areas are from a sustainability perspective.
- Once the analysis is completed, the items that pose a risk (anything with a + score) should be sectioned off and reviewed, and mapped to into a Sustainability Management Plan (SMP)







# A lot of good info...







		GRI G4 Element Alignment	UN Global Compact Ten Principles	Λ		
	Francis	Return on Investment	Direct financial Benefits	Economic Performance		
	Economic Sustainability		Net Present Value			
	Sustainability	Business Agility	Flexibility/ Optionality in the Project			
			Increased business flexibility	Market Presence		Methods
			Local Economic Impact			
			Indirect Benefits	Indirect Economic Impacts		
		Transport	Local Procurement	Procurement Practices	Businesses Should Encourage the development and	1
S			Digital Communication		diffusion of environmentally friendly technologies	
Ĥ			Traveling			
ğ			Transport	Transport		
Impacts	Environmental		Water Consumption	Water	Businesses should undertake initiatives to promote	
	Sustainability	Water	water consumption	water	greater environmental responsibility	
	Sustainusinty		Water Table impact (Quality/Quantity)			
S		Energy	Energy Used	Energy	Businesses should support a precautionary approach	
S			Clean Energy Return		to environmental challenges	
U U			Emission / Co2 from Energy Used	Emissions		
Process		Waste	Recycling		Undertake initiatives to promote greater	
2			Disposal		environmental responsibility	
			Reusability			
σ			Incorporated energy			
and			Waste		Businesses should uphold the elimination of all forms of	
10		Labor Practices	Employment	Employment	forced and compulsory labour	
t l		2000111000000	Labor/ Management Relations	Labor / Management Relations		
Б			Health and Safety	Occupational Health and Safety		
σ			Training and Education	Training and Education		
0			Organizational Learning			
5			Diversity and Equal Opportunity	Diversity and Equal Opportunity		
Project Product			Diversity and Equal Opportunity	Diversity and Equal Opportunity	Businesses should uphold the freedom of association and the effective recognition of the right to	
<u>ie</u>		Non-Discrimination	Non-Discrimination	Equal Remuneration for Men and Women	collective bargaining. Businesses should uphold the	
0					elimination of discrimination in respect of	
2		Human Rights			employment and occupation	
	Social Sustainability		Freedom of Association	Freedom of Association and Collective		
				Bargaining		
			Child Labor	Child Labor	Businesses should uphold the effective abolition of child labour	
			Forced and Compulsory Labor	Forced and Compulsory Labor	Businesses should make sure they are not complicit in human rights abuses	
		Society and Customers	Community Support	Local Communities		
			Public Policy/ Compliance	Compliance		
			Customer Health and Safety	Customer Health and Safety		
			Products and Services Labeling	Products and Services Labeling		
			Market Communications and Advertising Customer Privacy	Market Communications		
		Ethical Behavior	Investment and Procurement Practices	Customer Privacy Supplier Environmental Assessments	Businesses should support and respect the	
			Bribery and Corruption	Anti-Corruption	protection of internationally proclaimed human	
			bridery and corruption	Anti-contaption		istered
			Anti-Competition Behavior	Anti-Competition Behavior	all its forms, including extortion and bribery.	ning SP rse
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# Group Exercise Learning How to use P5



You are a project manager for ABC Beverage Company who just Came up with a new idea "bottled water".

With your project management hat on, what are some examples of projects that would be associated with bottled water?









# Class Exercise. Learning How to use **P5**



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Totals



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# **Define Sustainability Objectives**









# What is an SMP?









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# Tools to Integrate Sustainability and Project Management





The SMP Ties corporate CSR goals and objectives to the project plan and identifies project impacts from an Environmental, Social, and Economic standpoint





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   An overview of our business, investments and commitments
- Alternative Energy in the US
- US Jobs and Careers
- US energy issues
- Our support of Team USA

토 🚹 🛅 Join in the conversation

#### **Gulf of Mexico restoration**



Gulf of Mexico restoration







t was a great year for BP's Target Neutral

#### Improving safety in Iraq



Under Saddam Hussein's regime, safety wasn't a priority at the supergiant Rumaila field in Iraq; but now it's a very different story as BP and its partners go to work there each day

 Read how simple rules have brought about a transformation



# **Oil and Water**





The project to deploy the the Deepwater Horizon in the Gulf of Mexico did <u>not</u> include an SMP. (or a Risk Register...)





# What is a Sustainability Management Plan?



- The sustainability management plan (SMP) provides the the framework to address impacts short and long term to sustainability objectives as they pertain to the project with an emphasis on Environmental, Social, and Economic impacts to
- An SMP determines how green / sustainable the project delivery will be and how it will align with organizational strategy through governance
  - An SMP outlines the processes to manage and mitigate a project's negative socio-ecoenvironmental impact.







# The Value of an SMP



- Enhances the focus to the shared connections with the next projects in the queue
- Highlight opportunities for external stakeholder communication identifying increased controls in process as well as social, environmental and economic impacts.
- It reinforces that sustainability equates to profitability!





# The Value of an SMP



- As a project foundational document to promote visibility and governance
- Establish the communication plan to broadcast the gains in management of finite resources and minimizing waste
- Indicate and enhance focus to the shared connections with the next projects in the queue
- Highlights opportunities for external stakeholder communication identifying increased controls in process as well as positive environmental impacts





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# What is included in an SMP



- □ Table of Contents
- Document Control
  - Version History and recipients list
- Purpose
  - A brief on what the document is
- Executive Summary or Brief
  - An outline of the sustainability factors in the project
- List Project Sustainability Objectives
  - Derived from the P5 Impact Analysis
- Outline Key Measures and Performance Indicators (Qualitative and Quantitative)
- The P5 Impact Assessment Score (and updates)
- Scope Exclusions
- Sustainability Reviews and Reporting
- Checklist





Course



# What is included in an SMP



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- The P5 Impact Assessment Score (and updates)
- Scope Exclusions
- Sustainability Reviews and Reporting
- Checklist





Course



# Version Control and Distribution





### 1. Document Control

1.1. Revision History

Version	Author	Reason For Issue	Date

### **1.2.** Document Distribution

Number	Owner	Location
Master		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		





### Purpose



### Example



This document has the purpose to develop the Sustainability Management Plan for the Code Enforcement Agency Project.

This Project fits strategically upon the Aims & Priorities of the Detroit City Council in particular, but also of the Federal Security Agency, USA. with regards to their policies and guidance on environmental and sustainability governance.

This document details activities, objectives and key performance Indicators taken into account to establish, implement and maintain a new code enforcement that will resolve the problems detected, but also increase the prestige of the city, which will be recognize as one of "Greenest City" of the United States.

The renewed prestige of Detroit will impact positively in the local and international tourism with an increase of 40%, with at least of 15% increase of Geographic Gross Product and 5% increase of Total Gross Product in 5 years according to Statistics Agency XYZ.





# **Executive Summary**





What is the project trying to achieve from a high level and how does it affect

- A. The planet
- B. Society
- C. Corporate bottom line





# Project Sustainability Objectives





	Deliverable 1	Deliverable 2	Deliverable 3	Score
Carbon	+3 (high /negative)	+1 (low negative)	-2 (medium positive)	+2
Emission	IS			

Sustainability objectives are taken from the P5 analysis. Anything that needs to be improved upon is included.





# Key Performance Measures (Qualitative and Quantitative)



### Example:



### **Key Performance Indicators Environmental**

- · Energy: Number of green Buildings in the city
- Waste: Amount of dangerous waste treated
- Transport: Number of electric public transport
- Water Usage: Amount of building with water recycled system
- Materials and Resources: amount of promotional benefits to acquire local materials and their impacts in the local industries. ie. Construction

### **Key Performance Indicators Financial**

- Return on Investment: ROI
- Business Agility: number of days to resolve upcoming squatting, weeds, pests, unsafe buildings, graffiti

### **Key Performance Indicators Products**

- Servicing of Product: Satisfaction Survey Results (surveys carried out be independent agency)
- Lifespan of Product: The Enforcement Agency should have 60% Community Satisfaction

### **Key Performance Indicators Processes**

- Maturity of process: Maturity of the EMS: Plan-Do-check-Act
- Maturity Efficiency and fairness of process: number of corrective actions and its financial impact

### **Key Performance Indicators Personal**

- Labour Practices and Decent Work: Number of labor accidents and amount of money incurred
- Society and Customers: Number of children received training course regarding Sustainability.
- Ethical Behaviour: implement "Sustainability Awards" at school, restaurants, event organizer, etc.





# P5 Impact Assessment



A summary of the planned environmental impact and steps that will be taken to decrease the effects or increase the opportunities identified

P5 Category	P5 Sub Category	P5 Element	Reasoning	Score	Legal Regulation	Proposed Action
Social	Labor Practices	Employment	Hiring	+2	None	Propose a
	and Decent		Practices do			competency/skills
	Work		not meet the			assessment as part
			needs of the			of the interview
			project.			process
Environmental	Transport	Local	Components	+2	Out of Compliance	Recommend local
		Procurement	are being			suppliers and cost
			shipped from			benefits analysis.
			8,000 Miles			
			away			





# The final pieces

Scope Exclusions None.



### Sustainability Risk Management

For the Sustainability Risk Management the agency will apply the PMBOK<sup>®</sup> Guide. The Sustainability Risk Plan should include the above environmental aspects and impacts and the response for each of one.

### **Reviews and Reporting**

The Enforcement Agency members monthly will review and make a Sustainability Report that will be published at website of Enforcement Agency; and maintain periodically meeting with representatives of local community groups, and State and local officials.

### **Current Sustainability (P5) Score**

+2.03

### Checklist

- The Following Assessments are considered in this Sustainability Management Plan:
- Financial Assessment
- Process Assessment
- Product Assessment
- Environmental Assessment
- Social and Corporate Assessment









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Course

Exercise 2 Learning how to use an SMP



# Awesome Cookies inc





# Brief



### We have been hired in to save Awesome Cookies Inc.

 Awesome Cookies Inc. has no project management standards or methodology. The average staff person however has been employed within the company for 15 years. Their CEO recently was caught in a scandal and they have been listed as one of the most wasteful companies in terms of production and distribution and sales are declining.

### **Core Problems:**

- Unless their core product, "The Ultimate Choco-Cookie" can be redeveloped from the ground up to become a more sustainable product, they may have to close operations
- It is rumoured that ingredients in the cookies are not accurately reported on the labels and blogs and YouTube videos have popped up with consumers complaining.
- Distribution has been difficult, as the taxes in Athens have skyrocketed due to the economic challenges in Greece.
- Their CEO passed away unexpectedly and so the executive board has hired our managementconsulting firm to guide them towards a new and brighter future.

# As the future of their brand and company rests in our hands, we are to recommend a project-based strategy to turn this company around:









- 1. Recommend Four Projects to turn this company around.
- Develop a high level statement of work for each project.
- Use P5 to measure Impact based on what we already know about their products and supply chain and recommend changes through the development of an SMP.







- **1**. Reorganization
- 2. Develop the Cookie
- 3. Market
- 4. Distribution





# Day One Review



- Basics of Sustainability
- Sustainability in Project management
- ISO 9000
- ISO 14000
- ISO 50001
- The Pre-Project Phase







### EnVex #1







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# **Responses from other Students**



<sup>44</sup>Having completed the various exercises for building the "Data Centre of the Future" it has certainly brought home the fact that with "Sustainability glasses" on you can pretty much evaluate every aspect of every project in a different light. A key lesson has been that, whilst a product might seem more sustainable or "green", there are loads more elements in the overall chain to be considered i.e sometimes the process by which that product was manufactured or transported has a far more detrimental impact on the environment than perhaps an alternative product.

I've realized that there are a lot more sustainable products available than I initially thought. Hopefully, in time, there will be more choice in this space.

Sustainability today is our future tomorrow! Riana Husselman, IP Project Manager BBC London













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## Why Plan?









### **Project Plan Document**



- Owner/Author
  - Project Manager
- Authority
  - Project Sponsor
- Audience
  - Project Team, Stakeholders and interested parties
- Development
  - Ongoing throughout the whole project lifecycle keeping it 'live' to all changes
  - Includes the Sustainability objectives from the SMP





# **Project Plan Purpose and Contents**





Acceptance Criteria **Key Performance Indicators** 

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# Defining the Scope









#### **Acceptance Criteria**



- Defined as part of Requirements Gathering
- Reviewed constantly but rigorously in the early phases
- Agreed between the Customer and the Project Manager
- Approval by Project Sponsor within Project
  Plan
- Planned Process of Acceptance



# **Refining an SMP**











- The Refinement of the SMP should include:
  - Scope Changes
  - Sustainability Quality
    Components
  - Changes to the P5 Score +/-
  - Sustainability Risks Identified







# Quick Review: The Principles of Quality Management

These principles embodied in ISO 9001 have been developed with the intention that management can lead the organization towards improved performance.

- Customer Focus
- leadership
- Involvement of people
- Process Approach
- System approach to management
- Continuous Improvement
- Factual approach to decision making
- Mutually beneficial supplier









# Product Breakdown









# Work Breakdown







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# Numbering System









### Organization Breakdown







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#### **GPM Best Practice**



- Separate off the Sustainable objectives to be integrated into the project plan
- Develop your own PBS and WBS
- Identify what work is needed
- Assign responsibility for the tasks
- Integrate your PBS/WBS with the Project Ο Manager
- Align the needs and the deliverables

















#### The ability to manage finite resources is a critical skill

# **RESOURCE MANAGEMENT**





# Types of Resources

#### Consumable

- Raw materials
- o Money
- Natural Resources

#### Non Consumable

- $\circ$  Machines
- Facilities
- Test equipment
- o People







#### **Resourcing Process**

### The three basic steps:

- Allocation once activities been scheduled resources are allocated to each activity. This enables the total requirements to be determined against the project timescale.
- Aggregation resource requirements are totalled to determine the level of resources required for each time period.
- Scheduling it is unlikely that the availability of resource requirements will map to the requirements (or demand). Such constraints are applied to the resource requirements and an optimized schedule is determined.











#### **Resource Management**



- Effective resource management ensures:
  - Efficient utilization of resources
  - Confidence that the schedule is realistic in terms of the required and available resources
  - Early identification of resource capacity bottlenecks and conflicts.



#### **GPM Best Practice**



- Work with the Project Manager to schedule your activities
- Compliment the Project Delivery with a Supporting Role
- Keep a tight control over resourcing matters to avoid scope drift
- Cost and Monitor each resource for further lessons in the future to ensure audit ability











Ensuring the best outcomes

# QUALITY





#### Constraints









### The Planning Phase









# What does Quality Mean?



 Outputs and processes of the project meet the needs of stakeholders

- Fit for purpose
- Degree of conformance





# **Quality Responsibilities**



- Management responsible for creating an environment for achieving project quality (organization & project)
- Organization responsible for improving project processes – learning from experience (continuous improvement)
- Quality covers products and management processes





# **Quality Environment**













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## Cost of Quality







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### Sustainability and Quality Components















of Project Management







You gave me what I asked for but not what I needed...

# **REQUIREMENTS MANAGEMENT**





#### **Projects integrating Sustainable Methods** Design Freeze **Baseline** Quick Detailed **Finish** Get the Idea **Do It** off Look benefits Look **Requirements Capture and Testing** Configuration Management & Requirements **Change Control Reviews**

**Requirements Life Cycle** 





#### The Swing







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P5 Sustainability Score Update
--------------------------------

Initial P5 Score	Current P5 Score	Variance
+ 2.03	+1.94	09

Project status reports are key to monitoring and controlling projects and

Changes inc	lude at minimum:				
	t issues and status	e <b>pi Eleliseit</b> one:	<sup>5</sup> Reason for Change	Previous Score	New Score
	t <b>hisks Bridthewith</b> e eftigdaterk odate	y <b>Tane loenng</b> tad	diessieed approval to change hiring practices for two skilled positions	+2	+1








Keys to Sustainability are defining every possible risk to an initiative.

# **RISK MANAGEMENT**





### What is a Risk?



- What is the definition of a risk?
- Both positive and negative effects on project objectives
- Threats and
  Opportunities







### Levels of Risk









## Sustainability in Risk Management







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#### **Gulf of Mexico restoration**



Gulf of Mexico restoration







t was a great year for BP's Target Neutral

#### Improving safety in Iraq



Under Saddam Hussein's regime, safety wasn't a priority at the supergiant Rumaila field in Iraq; but now it's a very different story as BP and its partners go to work there each day

 Read how simple rules have brought about a transformation



# **Oil and Water**





The project to deploy the the Deepwater Horizon did not include an SMP.





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## **Risk Management Plan**









### **Risk Identification Methods**



- P5 Impact Analysis
- Workshops
- Post Project Reviews
- Check and Prompt Lists
- Brainstorming
- Assumptions analysis
- SWOT analysis/PESTLE analysis
- Interviews
- Cause and Effect Analysis





#### **Risk Register**

PR	ľS	Μ	
	ustain	able Methods	

		Risk	Registe	r	Version		
Project	t:	Project numb	Project number			Page of	
Ref.	Description	Probability	Impact	Action		Owner	
1273	Residents object to planning submission	Н	VH	Agree to develop gare	DPJ		
1274	Furniture damaged en route	м	м	Pay premium for high quality removal firm and agree packing specification		AJD	
1275	Production line equipment damaged en route	н	м	Pay premium for high quality removal firm and agree packing specification		AJD	
1276	Furniture supplier fails to meet delivery deadline	н	н	Retain old furniture temporarily		JK	
1277	Building company goes bust	VL	VH	Perform detailed financial check		FDM	
1278	Poor weather during external refurbishment	L	м	Plan external work when weather is favourable. May require short term changes to schedule		LD	
1279	Scope of refurbishment work extended	н	н	Maintain strict Change Control procedures		FDM	
1280	Injury during decommissioning	М	L	Ensure safety regulations are strictly enforced		PH	
1281	Petty vandalism	L	н	Cover with insurance		FDM	
1282	New furniture faulty	М	М	Retain old furniture temporarily		JK	
		1		八			
		$\neg \gamma$			$\overline{}$		
	Identification	Asses	smen	nt Re	esponse		

Other fields that may be included: Proximity/Status/Title/Associated Risks/Project Area



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## Analysis (Assessment)



- Two Techniques
- Qualitative
  - $\circ~$  Subjective judgement of probability and impact
- Quantitative
  - Statistical assessment of variations











## PERT



#### • Program Evaluation Review Technique

- Estimates are uncertain
- Based on three point estimates
- Assumes a Beta distribution
- Generates a single result
- Used for costs, schedules and technical parameters







#### **PERT Process**



- Three point estimates:
  - Optimistic Pessimistic Most likely



- Calculate mean duration:
  - = optimistic + (4 x most likely) + pessimistic

6

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#### **CPA PERT Demonstration**









#### **PERT Durations**



Task	Optimistic	Most Likely	Pessimistic	Mean
Α	2	2	8	3
В	4	5	12	6
С	7	8	15	9
D	10	14	18	14
E	6	7	14	8
F	7	9	17	10
G	2	3	10	4





#### **Recalculated CPA**



Task	Optimistic	Most likely	Pessimistic	Mean
А	2	2	8	3
В	4	5	12	6
С	7	8	15	9
D	10	14	18	14
E	6	7	14	8
F	7	9	17	10
G	2	3	10	4







### **Risk Threat Responses**



Response plans can be developed and implemented once the risks have been assessed and prioritized. There are a number of generic response strategies.

- Avoidance an alternative approach is taken to avoid the risk.
- **Transfer** assign contractual responsibility to for example, a sub contractor better placed to manage the risk. Another example of this is insurance where another party provides compensation in event of risk impact
- **Reduction** proactive measures to reduce likelihood, impact or both Ideally reduction measures should be taken for high level risks.
- Acceptance where the risk impact is low or cost of mitigation too high. This is sometimes known as absorption.



### **Risk Opportunity Responses**



- **Exploit –** This method is carried out when an opportunity materializes that allows you to truly gain from it.
- **Enhance** This is where the project team puts in place pro-active measures to maximize the likelihood of a situation occurring. Opposite to the reduce response.
- **Share** This is a chance where not only your project but any other relevant projects that can use the situation make sure that the opportunity is fully communicated to gain the most company wide.
- **Reject –** This is a response that can be chosen should the situation not be right for the project at the time for financial or other reasons.
- **Contingency** A fall-back plan that will be implemented if the risk occurs. Additionally we can add an allowance included in estimates for events that cannot be predicted with any degree of reliability.





#### **Monitor and Control**









#### **GPM Best Practice**



- Understand the three elements
  - Cause, Event and Impact
- Look for the Opportunities
- $\circ\,$  Can the risk provide a Sustainable Benefit ?
- Plan the Response to risk in detail
- Watch and React











#### Project manager to the rescue!

# **ISSUE MANAGEMENT**





### **Issue Definition**



- Threat to project objectives that cannot be resolved by Project Manager
- Problems are day to day concerns
- Risks may not happen
- Issues have already occurred and must be escalated
- Outside the direct control of the Project Manager
- Project Sponsor has the option to further escalate
- Poor Issue Management is a major source of project failure









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#### Issue Log - Contents



No	Description	Raised by:	Date of issue	Impacts	Possible resolution	Resolution owner	Final outcome	Closure date









The Project Environment

# **ORGANIZATIONAL STRUCTURE**





#### The Project Environment External Environment stainable Methods **Organizational Environment** ISO 21500 Organizational Strategy Opportunities Benefits **Project Environment** Project Governance **Business Case** Project Organization





















- Strong technological & process centres of excellence
- Stable, consistent, efficient
- Good vertical integration through function – clear lines of communication
- Poor horizontal integration across functions

- Strong business and product focus
- Flexible, inconsistent, effective
- Good vertical integration through project – clear lines of communication
- Poor horizontal integration across projects





## Matrix Strengths & Weaknesses



- Communications & Integration
- Focus & Motivation
- Technological Excellence
- Accountability
- Business Responsiveness





#### EnVex #2











## Day Two Review



- The Planning Phase
- o Risk
- Quality
- Issue Management
- Estimating and
  Scheduling
- The Project Organization











What defines Success?

# PROJECT SUCCESS AND BENEFITS MANAGEMENT





#### According to PMI'S Pulse of the Profession



#### The Risks of Undervaluing Project Management

Projects and programs drive change in organizations. When they fail, organizations lose money and marketshare, and they become less likely to execute their strategies and squander competitive advantage. With stakes this high, projects, programs and especially the portfolio cannot be left to chance. They need to be managed by skilled, trained professionals in a standardized way throughout an organization and align with organizational strategy to ensure success.

The third global survey on the current state of project management conducted by PricewaterhouseCoopers LLC (PwC) in 2012 revealed that as many as 97 percent of respondents believe project management is critical to business performance and organizational success, and 94 percent believe project management enables business growth.

However, this year's Pulse of the Profession<sup>™</sup> finds that organizations undervalue project management and put inadequate focus on talent development. Only about half of respondents (54 percent) say their organizations fully understand the value of project management. Although this year's Pulse demonstrates

the strategic imperative of mature project management, this competency often lacks representation at the highest levels, with only six percent of organizations having a project management-related role at the C-level.

Perhaps as a result of this undervaluing of project, program and portfolio management, project success rates are declining. This suggests that organizations must mature their project, program and portfolio practices to reverse this trend and promote success across the organization. Since 2008, the percentage of projects that project managers say have met their original goals and business intent has declined 10 percentage points (from 72 percent in 2008 to 62 percent in 2012).

Declining project success rates have ramifications that extend beyond the scope of any individual project. When project timelines are not met, when budgets are exceeded or when intended project goals are not fulfilled, unintended demands are placed on other resources—people, projects, products, budgets and overall organizational goals. This boils down to wasted money that an organization can never get back (see Figure 1).








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# **Product Delivery Success**







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# **Success Factors**



- Senior management support
- Clearly defined goals
- Good communications
- Team motivation
- Strong leadership
- Supports the direction of the organization
  - Financial, Environmental, Social





# The 2022 World Cup Stadium Project



Dozens of Nepalese migrant laborers have died in Qatar in recent weeks and thousands more are enduring appalling labor abuses, a Guardian investigation has found, raising serious questions about Qatar's preparations to host the 2022 World Cup.

According to documents obtained from the Nepalese embassy in Doha, at least 44 workers died between 4 June and 8 August.

More than half died of heart attacks, heart failure or workplace accidents.



Photo Courtesy of FIFA.com





# The 2022 World Cup



# The investigation by the Guardian reveals:

- Evidence of forced labour on a huge World Cup infrastructure project.
- Some Nepalese men have alleged that they have not been paid for months and have had their salaries retained to stop them running away.
- Some workers on other sites say employers routinely confiscate passports and refuse to issue ID cards, in effect reducing them to the status of illegal aliens.
- Some labourers say they have been denied access to free drinking water in the desert heat.
- About 30 Nepalese sought refuge at their embassy in Doha to escape the bruck conditions of their employment.

		Record of the		in July 2	113	
S.N	Name of the Deceased	Escorting Person	Quart Rival	Date of Death	Cause of Death	Dute of
01		Amar Bahader Chale	12471.00	28/06/2011	State Stat	NOC
02	* water	Arjun Bishwokarma	5546.00	27.00.2013	Acute Cardiac Failure Sudden Cardiac Arrest	01.07.20
03		Buddhi Bahadar Magar	14155.00	14.05.2013		01.07.20
04	and the g	Lok Bahadur Thapa Magar	4570.00	26.05.2013	Flectrocution Sudden Cardiac Arrest	02.07.20
05		Shailendra Kumar Sah	\$462.00	13.06.2013	Cramial T	07.07.20
06		Rir Bahadur Dimbuog	3000.00	29.06.2013	Cranual Trauma due to RTA Acute Cardiac Arrest	07.07.20
07		Prem Kumar Dhimal	2730.00	18.06.2013	Head injuries skull fracture cervical venebrae due to RTA	07.07.20
08		Chanchal Ragbamshi	2750.00	18.06.2013	Head injuries fracture short	1000-38
09		and the second strate	- Contraction	- Charles - Char	due to RTA	08.07.20
1		Satya Narayan Rajbanshi	2760.00	18.06.2013	Head injuries fracture skull due to RTA.	08.07.20
10		Lok Nath Regmi	3879.00	07.07.2013	Sudden Cardiac Arrest	100.00
		Chandra Bahadur Yari	3479.00	24.06.2013	Multiple blast injuries due to	09.07.20
A 12		Bij Bohadur Lama	14380.00	02.07.2013	fall from height during work. Severe bleeding due to traumatic crush injury	14.07.20
13		Braham Dev Mandal	3976.00	05.07.02013	A REAL PROPERTY AND A REAL	and the second
14		Man Bahadur Sapkota	2523.00	04.07.2013	Sudden Cardiac Arrest	14.07.20
10				2013	Crushing of the head due to RTA	15.07.20
15		Jagat Bahadur Moktan	10185.00	14.07.2013	Sudden Cardiac Arrest	10000
16		Yaday Bahadur Khadka	6760.00	02.02.2015	Arrest	16.07.20

### Photo Courtesy of www.theguardian.com



# 2013 RANA Plaza Collapse – Many Projects Failed...







NEVER STOP EXPLORING





The Rana Plaza factory collapse in Bangladesh killed 1,132 garment workers and injured more than 2,500 in April





# The Ugly Truth About Projects: There is More Chance To Fail Than Succeed





74% of Projects Meet its Target



50% Projects suffer Scope Creep



The Longer a





# How costly is project failure?



- Airbus A380: Delayed by 3 years, 30% over-budget and customers have cancelled orders and have asked for steep discounts. The Payback rate (IRR) is cut from 20% to 13%, with US\$6.1 billion in operating profits wiped off
- Denver International Airport: Delayed by 2 years, the original planned cost was US\$ 1 billion, final cost was US\$ 5 billion
- American Airlines: Car rental & hotel reservation system project scrapped after spending \$165 million
- US FBI Virtual Case File System: \$175 million program scrapped
- The Opera House, Sydney, Australia: Original Cost A\$ 7 million, Final Cost A\$ 100 million





# How costly is project failure?



- London Ambulance Service Dispatch System: Late by a year and was taken offline after 1 day. 20-30 deaths were attributed to the failed project.
- US Government Accountability Office: In 2008, 413 IT projects worth \$25 billion were found to be "poorly planned, purely performing, or both."
- Ontario's Electrical Utility: Three of its most senior executives were fired after they were found responsible for mismanaging the restoration of the Pickering Nuclear Plant. The cost of refurbishing the four nuclear reactors at the plant rose from \$780 million in 1997 to a projected \$4 billion.







### Examples

- Increased market share
- Increased turnover and profit
- Greater output capacity
- larger product portfolio
- Improved security
- Increased staff satisfaction
- Higher Brand position
- Decrease in Carbon Footprint





# Benefits Management Plan



- Benefits
- Benefits Profiles
- Roles and Responsibilities
- Tracking and controlling
- Benefits realization Reviews
- Supporting methods











The Interdependency of KPI is a simple concept.



**Budget miscalcs** = increased/decreased scope time



**Poor Timelines** = More Resources needed



**Undefined or Confusing Scope** = More Money & Time

## Failed Projects = Waste







# Understanding Organizational Goals



- Project Managers must have an understanding of organizational goals beyond project objectives.
- Projects or deliverables that do not align with organizational goals need to be weighted for risk.
- Q. What are some ways to keep current?









# **TEAM SKILLS**





# **Team Attributes**



- o Focus
- Motivation
- Defined Roles
- Cohesion and Trust
- Shared Responsibility
- Shared Values





# Team Development – Tuckman Model







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# **Teambuilding Approaches**







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# **Belbin Team Roles**

### Strengths and ALLOWABLE weaknesses

As well as the strength or contribution they provide, each Team Role also has an associated allowable weakness: a flipside of the behavioral characteristics, which is allowable in the team because of the strength which goes with it.

#### For example:

- Plants could be unorthodox or forgetful
- Resource Investigators might forget to follow up on a lead
- Monitor Evaluators could be overly critical and slow moving
- Coordinators might over delegate leaving themselves little work to do
- Implementers might be slow to relinquish their plans in favor of positive changes
- Completer Finishers could be accused of taking their perfectionism to the extremes
- Team workers might become indecisive when unpopular decisions need to be made
- Shapers could risk becoming aggressive and bad-humored in their attempts to get things done
- Specialist may have a tendency to focus narrowly on their own subject of choice

A team is not a bunch of people with job titles, but a congregation of individuals, each of whom has a role which is understood by other members. Members of a team seek out certain roles and they perform most effectively in the ones that are most natural to them.

BELBIN

#### Dr. R. M. Belbin

#### (belbin.com)







"

# Sustainability in Human Resource Management







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"Are we there yet?"





# **Project Controls Process**







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# **Tolerances and Triggers**





#### **Baseline Planning**



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# **Project Scoring Model**





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# Developing Weighted Project Score Formula



- O Project Score =
- Financial Risk v Return \* 20% +
- Strategic Fit \* 20% +
- Product \* 10% +
- Market Attractiveness \* 20% +
- Technology Adoption Life
  Cycle \* 10% +
- Synergies \* 10% +

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 Technical Feasibility \* 10%







### **Triggers & Key Performance Indicators**

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# Methods and the Life Cycle



- Process Descriptions for each Phase
- Inputs and Outputs for processes
- Documentation and Templates
- Organization Guidelines
- Clear Roles and Responsibilities
- Clearer Procedures for Specific skills





# **Methods Benefits**



- Consistency
- Continuous Improvement
- Common Understanding between the Project Team and Stakeholders









# **PROCUREMENT MANAGEMENT**





# **Procurement Terms**



# • Acquisition

## Contracts

- Firm Fixed Price, Fixed Price
- Cost plus Incentive
- Cost plus Fixed Fee
- Cost reimbursable
- Changes & Variation Orders





### Process









# Contract vs. Risk









# Acquisition Plan



### Acquisitions, Materials, Sub Contracts and Services

- Strategy
- Products Required
- Quality Requirements
- Supplier/Contractor Selection & Control
- Quality Planning Requirements
- Regulatory Requirements







# **Procurement Selection Process**



- Define Procurement Strategy & Requirements
- Research the market & identify potential suppliers
- Check track record/capability & shortlist
- Invite Tenders
- Evaluate Tenders
- Select Supplier & Negotiate Contractual Terms





# **Evaluation and Selection Criteria**





- Price
- Quality
- Timescales Delivery Dates
- Contract Terms Guarantees, etc.
- Support Costs/Arrangements
- Risk Management
- Quality Management
- Responsiveness to Changes
- Sustainability Factor\*





## **Green Vendor Scorecard**



Rank

0

1

2 3 4

Decision Model			lor 1	Vend	dor 2	Vend	dor 3	Vend	dor 4	Ven	dor 5	Legend	
Criterion	Weight	Rating	Score	Description	R								
Amount of recycled materials in their products	0.2	1	0.2	3	0.6	2	0.4	1	0.2	1	0.6	Not thinking to	
Products can be recycled	0.3	2	3	2	0.6	2	0.6	2	0.6	0	0	Not yet but worki	r
Products are energy efficient	0.1	4	0.4	4	0.4	4	0.4	4	0.4	2	0.8	Somewhat	
Product is harmful to the environment	0.2	1	0.2	1	0.2	3	0.6	3	0.6	3	0.6	Most	
Has an active environmental management policy	0.1	2	0.2	0	0	1	0.1	2	0.2	1	0	Yes!	
Customer Service Capabiliies	0.1	2	0.2	3	0.3	2	0.2	1	0.1	3	0.9		
Total	100%	12	4.2	13	2.1	14	2.3	13	2.1	10	2.9		

Weight is a percentage ranking with a combined total of 100%














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# **COST MANAGEMENT**













#### **Project Cost Plan**



	Project Months						
<b>Cost Categories</b>	1	2	3	4	5	6	Total
Resource A	50	75	75	100	100	40	440
Resource B	30	40	40	40	40	20	210
Resource C	50	100	100	50	50		350
Total Labor	130	215	215	190	190	60	1000
Materials		50	50	50	50	100	300
Sub Contracts		30	100	250	150	50	580
Expenses	10	20	20	20	20	20	110
Period Costs	140	315	385	510	410	230	1990
Cumulative Costs	140	455	840	1350	1760	1990	
						<b>R</b>	

**Budget at Completion** 







### **Benefits of Cost Management**



- More likely to achieve Budget
- Control expenditure within Ability to Pay
- Control cash flow
- Learn Lessons
- Improve Estimating Accuracy



#### **Project Costs**



- Committed Placement of an order for work to be done. The money has already been allocated to the resource.
- Accrual Work that has been done but for which payment has not yet been made
- Actual Real expenditure that has left the budget and has already been spent.
- Forecast Out-turn The total of Committed Costs, Accruals and Actual costs plus the estimate of the costs remaining in the work packages left to complete the project









# EARNED VALUE MANAGEMENT





#### Pre-Requisites to EVA



- WBS
- Defined responsibilities
- Distributed budgets as WBS
- Authorised work scheduled
- Method for measuring achievement
- Budget phased over time
- Baseline plans
- Cost recording
- Performance data collection and analysis methods
- Forecasts for remaining work





#### **Earned Value Parameters**



#### **Earned Value**

Value of useful work achieved at specific time based on performance measurements

#### **Planned Value**

Value of work planned at specific time taken from baseline estimates and schedules **Actual Cost** 

Costs for work accomplished – i.e. bills, invoices, etc.







#### **Earned Value Principles**





Alaska Pipeline



✓ Work completed





### Earned Value Measurement









#### **Future Performance**





# EAC = Actual Cost + Estimated Cost to Go / CPI

Proactive measures are taken to recover variances

**Completed** work includes **non-recurring** elements

**Completed work includes** learning that will not apply to future work





### **Advantages of Earned Value**



- Measures the efficiency of work in progress
- Provides auditable and repeatable answers to:
  - Current performance
  - Future out-turn predictions
  - Future performance improvement needs
- Provides reliable information to aid decision making
- Facilitates trend analysis
- $\circ~$  Provides data for future estimates of similar work





### **Disadvantages of EVM**



- Because the technique takes a whole view, overperformance in one area may hide under-performance in another
- EVM requires considerable data administration and effort





#### Adding Sustainability to the Mix



Criterion	Weight	Rating	Score									
Amount of recycled materials in their products	0.2	1	0.2	2	0.4	2	0.4	1	0.2	1	0.4	No
Products can be recycled	0.3	1	0.3	1	0.3	1	0.3	1	0.3	2	0.6	No
Products are energy efficient	0.1	2	0.2	1	0.1	0	0	1	0.1	3	0.3	So
Product is harmful to the environment	0.2	3	0.6	1	0.2	2	0.4	2	0.4	4	0.8	M
Has an active environmental management policy	0.1	4	0.4	2	0.2	1	0.1	3	0.3	1	0.2	Ye
Customer Service Capabiliies	0.1	1	0.1	3	0.3	1	0.1	3	0.3	1	0.3	i —
												1

Not thinking to	0
Not yet but worki	1
Somewhat	2
Most	3
Yes!	4

Score = Rating \* Weight

Weight is a percentage ranking with a combined total of 100%







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The one constant you can always count on is change.

# **CHANGE CONTROL**





### Need for Change Control



- To control adverse impact of uncontrolled changes
- To enable beneficial changes
- To communicate changes to stakeholders
- To maintain baselines for effective control













## **Change Control Process**









### Key Documents – Change Request

Key Docum	PRÍSM	
Change Request:		<ul> <li>Projects integrating Sustainable Methods</li> </ul>
Activity Description:		
Description of Change Request:		
Reason for Change:		
		Dooplo Dlanat
	CHANGE IMPACT	People, Planet,
Impact on Schedule:		Profit Measures
Impact on Cost:		
Impact on Scope:		
Impact on Environment:		_
Impact on Process:	<	
Impact on Product:		
Impact on Personal:		
	APROVAL REQUERIMENTS	_
Project Manager	Date:	
Activity Owner:	Date:	
Project Sponsor:	Date:	
Any other people who need to approve t	the change request. This is based on your change control procedures	_

ove the change requ **536. 11113** ui chang







- Review what the original requirement was
- Assess the Impact on the Sustainability Measures
- Look for additional benefits within the change request
- Recommend action or actions to be taken with summarised impact
- Await Authorization



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Making it all fit together

# **CONFIGURATION MANAGEMENT**





#### Purpose



- To define the physical and functional characteristics of deliverable and management products, including their components and related documentation
- To control changes to products and their components to ensure physical and functional compatibility and integrity





## **Configuration Process**









#### EnVex #3









## Day Three Review



- Project Success
- Team Skills
- Procurement Management
- Cost Management
- Earned Value Management
- Change Control
- Configuration Management











How information will be Disseminated & Recovered from all Stakeholders

# **COMMUNICATION SKILLS**





## **Communication Planning**



- Information Requirements
- Communication Mechanisms
- Frequency of Distribution
- Information Sources
- Information Processing and Collation
- Roles & Responsibilities











Send Reinforcements, we are going to advance .....

Send Three and Four pence, we are going to the dance



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# **INFORMATION MANAGEMENT**



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#### Purpose



- Ensures information is available to support decision making in a timely manner
- Controls the quality, use and maintenance of information throughout the project life and after
- Supports communication processes





### **Information Process**







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## Key Information Products













# **NEGOTIATING SKILLS**





#### **Meeting Pre-Requisites**



- Understand differences between Stakeholder
   Interests
- Are there different Views or Approaches
- What Authority exists
- Is there any Power or Influence
- What are your Tolerance Limits
- What is the impact of Failure and Success








#### Preparation









#### Opening





- Introduce Parties and Explain their Roles
- State your Objectives
- Invite the other Party to State their Objectives
- Agree a Loose Agenda







#### Bargaining





- Present Your Offer
- Evaluate other Party's Response
- Bargain for Specifics
- Seek Agreement





## Closing









#### **Negotiating Power**









**Tactics** 







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Because every project runs smooth...

# **CONFLICT MANAGEMENT**

(photo from imdb.com)





#### **Conflict Causes**



- Conflict is the emotional, verbal, written or physical expression of differences regarding wants, needs or expectations between two or more individuals.
- Conflict directly impacts behavior, decision-making and the ability to complete assigned tasks.
- Conflict is inevitable in the workplace; it cannot be eliminated.
- The key to a functional workplace is the ability to minimize the escalation of conflict and ultimately resolve the differences.







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#### **Qualitative Costs of Conflict**



Stress, frustration and anxiety

Loss of sleep

Loss of productivity

**Employee turnover** 

**Employee Absenteeism** 

Presenteeism

**Grievances and Litigation** 

**Strained or broken relationships** 

**Decrease in customer service quality** 

**Injury and accidents** 

**Disability claims** 

Sabotage





### Quantitative Costs of Conflict



- The total value of lost work time due to stress is estimated to be \$1.7 billion. (WarrenShepel online], Health & Wellness Research Database, 2005)
- The rate of presentee-ism is estimated to be up to three times higher than absentee-ism.
- Conflict accounts for up to 90% of involuntary departures (Dana, Dan, [online] The Dana Measure of Financial Cost of Organizational Conflict, 2001)
- 42% of a Manager's Time is spent addressing conflict in the workplace. (Watson, C & Hoffman, R, Managers as Negotiators, Leadership Quarterly 7(1), 1996)











## Conflict through the Life Cycle



	Concept	Definition	Implementation	Handover & Closure
Cause	Ideas Benefits Options Funding	Benefits Requirements Options Funding Success Criteria Risks	Schedules CSC priorities Resources Changes Tech & Performance Issues Risks	Acceptance Snags Demobilisation Handover Activities Risks
Source	Sponsor Corporate Management Sponsoring bodies	Sponsor Users Corporate Management External Customers	Sponsor Project Manager Project Team Sub Contractors Resource Managers	Sponsor Operators End Users Project Team Acceptance Authority BAU groups

#### **Project Life Cycle**





#### **Conflict Resolution**









#### **Conflict Approaches**



- Competing
- Accommodating
- Avoiding
- Collaborating
- Compromising







## LEADERSHIP

Leadershi - proce. ability to motivate a gr Aleadership organizing a group of achieve a common 99 intentional influence



#### **Develop Strong Roots**





"People who cease to grow can't inspire others. Leadership begins with challenging oneself." – Daisaku Ikeda



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## Leadership



#### Manager Analytical, structured, controlled, deliberate, orderly

- Uses the power and logic of the rational mind
- Considers the dangers
- Concentrates on short-term results
- Follows visions
- ✓ Pursues the tangible
- Performs duties
- Controls
- Depends on authority

Which makes the best PM?



#### Leader

Experimental, visionary, flexible, undeterred, creative

- Uses the power of intuition and logic of the heart
- ✓ Senses opportunity
- ✓ Focuses on long-term results
- Creates visions
- Searches for potential
- ✓ Seeks the intangible
- Pursues dreams
- Inspires
- ✓ Depends on influence





#### Perspectives





maximise their performance







#### **GPM Best Practice**











#### Does this describe you?

- Genuinely interested in other peoples ideas;
- Do you smile? An old Chinese proverb states "A man without a smiling face must not open up a shop."
- Are you a good listener?
- So you make the other person feel important and do it sincerely?



### Leadership Skills



- Focused
- Manages conflict
- Good team Motivator
- Flexible & adaptable using the right appropriate styles
- Good Risk Taker
- Influencer & Problem Solver
- Delegates & Communicates
- Gives and Receives Constructive Feedback





#### Situational Leadership









#### Leadership Focus









#### **Follower Readiness**













**Closure Phase and Reviews** 





# Stakeholder Management and Organization Roles





#### Handover



- Product Delivery
- Acceptance Criteria
- Snagging List
- Transfer of Ownership
- Handover and Acceptance Process
- Key Stakeholders present
- Start Up requirements and operator training
- Review of risks and issues to be transferred into operations phase with deliverable



#### Closure



- Closure Report
  - Compared to Success Criteria
  - Transfer/close outstanding Risks and Issues
- Carry out audits, close documentation
- Contract review and closure
- Asset disposal and team redeployment
- Carry out Post Project Review
- Project Sponsor Formal Sign Off









# **PROJECT REVIEWS**



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#### **Quality Review**









#### **Post Project Review**















#### Preparation



#### Implementation









#### Stakeholder Review Roles









#### **GPM Best Practice**



- Sustainability Manager to hold separate review
- Ensure sustainability part of Post Project Review
- Complete a thorough Findings Report
- Ensure findings disseminated throughout the business to enhance lessons learned







#### EnVex #4









#### **Course Review**



- The Closing Phase
  Communication Skills
- Information Management
- Negotiating
- Conflict Management
- Leadership
- Project Reviews







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## Thank you



