

ASME Innovation Study Implementation Task Force Preliminary Report

Board of Governors
April 2008

Background

George Group Recommendations

RECOMMENDATION

DESCRIPTION

Develop Core Internal Expertise in Formal Process Improvement Methods

ASME needs the ability to innovate internally in organizational processes and operations as well as in external products, services and programs. Training a core set of staff in formal process improvement methods would provide a set of practitioners who could identify and guide internal process improvement

Implement a Platform Team Approach to Align with "Customer" Segments

A "platform" concept is a powerful way to establish and align roles and responsibilities with customer or market segments. Establishing platform responsibilities would facilitate VOC, ideation and project prioritization while leveraging existing organization and functional sectors

Put in Place a Formal Voice of the Customer (VOC) and Idea generation (Ideation) Process

ASME would benefit from a more systematic approach to collecting and documenting voice of the customer (VOC) information. This approach would define the sources of information, frequency of collection, and responsibilities for synthesizing and documenting results

Invigorate the Portfolio Planning and Lifecycle Management Process

Standard and regular approaches to prioritizing investments and evaluating existing products, services and programs are needed to identify the mix of projects that creates the maximum value for ASME and its customers. ASME can build on a good foundation on the existing balanced scorecard and past experience with AHP portfolio reviews - these need to be formalized and launched

Define/Clarify the Internal Responsibility for Breakthrough Innovation

ASME should consider assigning specific roles/responsibilities for identifying and developing breakthrough innovation concepts (i.e. those that do not fit the traditional ASME product, service or business model) - a "skunk works" approach to testing ideas that otherwise might not find an internal sponsor

Background

Task Force Members

- Win Phillips, Chair
- Bob Sims and Michael Merker, Codes & Standards
- Dave Wisler and Mike Michaud, Institutes
- Rich Laudanet and Noha El-Ghobashy, Knowledge & Community
- Rob Pangborn and Reese Meisinger, Strategic Management
- Bob Luna and Dave Soukup, Centers
- Tom Loughlin, Deputy Executive Director
- Roy Arbeit, Marketing & Sales
- Marc Goldsmith, BOG liaison
- Tom Barlow, ex-officio
- Virgil Carter, ex-officio
- Phil Hamilton and Allian Pratt, staff support

Vision for an ASME Innovation System

- To enhance ASME's leadership and value creation for engineering, members and customers by:
 - Ensuring ASME keeps pace with the rapidly changing global technology and economy
 - Encouraging individuals, sectors and units to be more innovative
 - Providing a structure, process and funding to support sustaining and breakthrough innovation
 - Providing an open and transparent process and resources for consideration and action on ideas
 - Monitoring and tracking progress

Innovation is classified in two categories

- **Breakthrough innovation** – ideas that do not fit well into, or are significantly differentiated from ASME’s existing programs and products; may be game changers or *disruptive* ideas that redefine the marketplace
- **Sustaining/incremental innovation** – ideas that enhance/add value to existing programs, products and services; may change the dynamics within the existing programs or marketplace

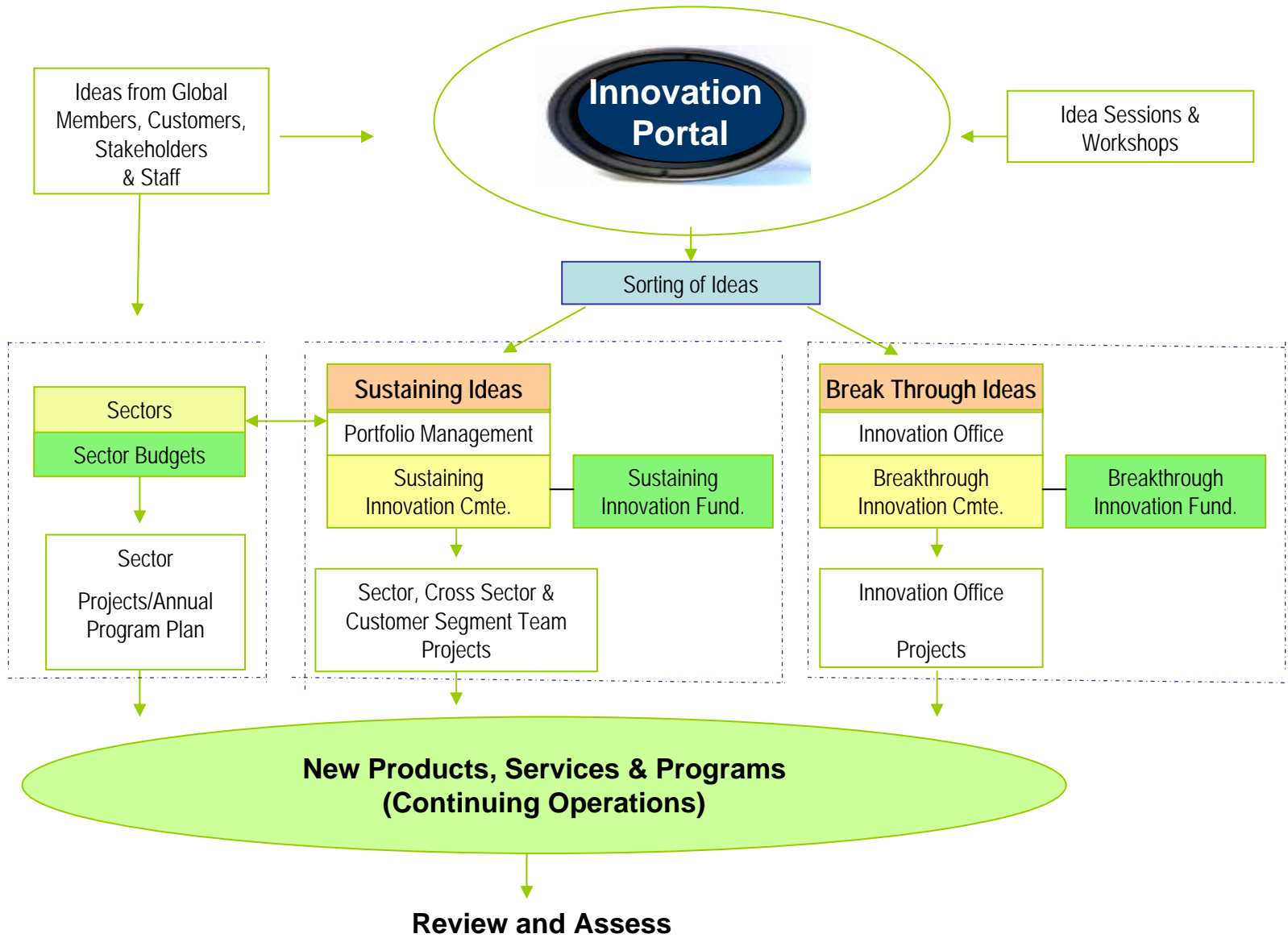
Breakthrough
Innovation

- Represents a major shift from what has come before
- May require new core competencies
- Often high risk, with potential high reward
- May require completely different channels
- Will have unpredictable revenues

Sustaining
Innovation

- Easily integrates into existing portfolio (fits into a sector’s existing programs/products)
- Applies existing core competencies (e.g. a new conference, journal or standard)
- Has a relatively low risk of failure
- Sold/provided to existing members/customers through existing channels
- Revenues can be predicted with reasonable certainty

ASME Innovation Process



Innovation Portal

- Web site that will provide innovation resources and serve as the collection point for ideas
- Designed to encourage ideas from anyone, anywhere, anytime
- Quick screen and trafficking by staff:
 - Forward to Sector for consideration
 - Send back to initiator with rejection or request for additional information
 - Forward to Portfolio Management (if sustaining innovation idea)
 - Forward to Innovation Office (if breakthrough innovation idea)
- Future possible enhancement: Wiki for comments/improvements on ideas

Phase-Gate Process for Managing Large-Scale Breakthrough and Sustaining Innovation Projects

Screening Ideas:
Criteria TBD

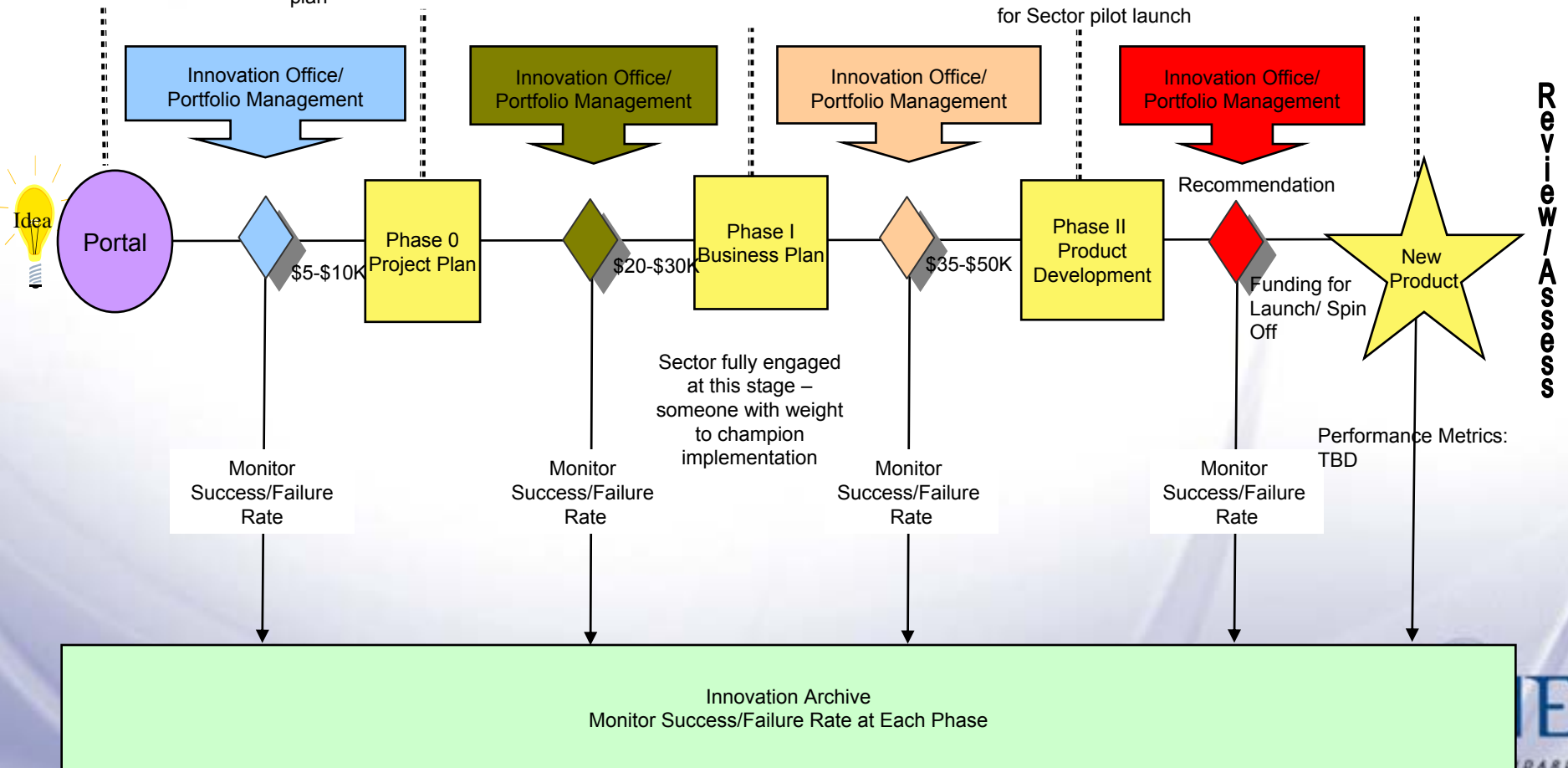
Phase Zero: Project Plan
Define product or program; establish feasibility; develop business model; and define market risk. Develop project plan

Phase I: Business Plan
Develop business plan, including:

- Refined project plan
- Refined resource requirements
- Intellectual property strategy
- Market Research conducted

Phase II: Product/Program Development
Conduct product/program development and complete a formal recommendation for Sector pilot launch

Phase III: Commercialization/launch
The New Product succeeds or fails in the market place as a pilot or spin off



Voice of the Customer

- **Definition & Purpose:** An ongoing research effort with a goal of obtaining insights on the issues and key problems faced by organizations and individual engineers.
- 90 minute interviews are conducted with a cross-section of engineers at different levels of their organization (optimally a senior engineering manager, a mid-level engineer and 1-2 early career engineers).

Year 1 Focus ⇒ Petrochemicals, Nuclear energy, Fossil energy, Bio-Processing, Water

Individual engineers ⇒ with specific focus on early career engineers

Timing ⇒ Interviews conducted between January - March

Electronic survey conducted in March

Analysis of data & reporting anticipated in late April

Customer Segment Teams

- **Definition & Purpose:** These are cross-sector teams focused on specifically defined target customer segments – subsets of ASME's total target customer universe.
- Acting as a formal, standing oversight body, working with the Portfolio Management Department and the Sectors, teams are responsible for:
 - Identifying customer needs, in part through VOC and other market defining, customer-centric research conducted by the Market Research Department.
 - Utilizing the results of this research to assist in establishing demand and priorities for product/service delivery and development.
 - Make recommendations on the menu of ASME products, services and programs offered to best meet the needs of their specific customer segment.
 - Projects will be executed by teams or Sectors as appropriate.

Training and Talent Development

- **Development and Training:** Develop the training necessary for volunteers and staff to implement the recommendations of the Innovation Study.
- **Personnel/Employee Incentives and Support:** Innovation will require incentives and support to encourage a busy workforce to actively support innovation.
- **Project Office:** Innovation will often require cross-sector teams. Project teams require tangible support and resources.
- **Business Processes/Procedures:** Process for continuous process improvement.

Funding and Resources

- Largely based on re-alignment of existing resources
- Re-purpose one volunteer committee in Strategic Management (Strategic Initiatives & New Products to Strategic Initiatives & Innovation)
- Sustaining Innovation Committee established
- Breakthrough Innovation Committee established
- Staff training/talent development to be managed by Human Resources
- Volunteer training to be developed in coordination with VOLT
- Two additional staff FTE
- Re-purpose the Strategic Priorities Grant Fund (SPGF)
 - Grant Management Committee to be sunset

Funding and Resources

Proposed Re-Purpose of Strategic Priorities Grant Fund:

- Total funds available to be determined by same formula as SPGF
- Allocation of total funds available to Sustaining Innovation Fund and Breakthrough Innovation Fund to be determined during annual budget process
- Both Funds to have volunteer/staff committees that screen proposals and select projects to be funded
- Grant and award criteria to be developed for each Fund (distinguish from Development Fund)
- Financial reviews and reporting to be coordinated with CFO
- Up to \$100K approved by President/ED
- Over \$100K approved by BOG
- Quarterly reporting to SMC, COFI and BOG

Funding and Resources

FYI 2009 Budget Request:

- Salary and benefits for two additional FTE: \$163,000
 - Portal development: \$75,000 (capital)
 - Training and talent development: \$60,000
 - Sustaining and Breakthrough Innovation Committees: \$15,000
- **Above costs (except portal) to be covered by approx. 12 percent allocation of Innovation funding pool**

Initial Top-Level Metrics















	Metric	Leading	Lagging
Process	<u>Innovation</u> <ul style="list-style-type: none"> • Number of ideas generated • Number of projects initiated 	Establish baseline in FY 2009	Actual FY 2009
	<u>Strategic Fit</u> <ul style="list-style-type: none"> • Percentage of projects with strong relevance to BOG strategic priorities. 	Establish baseline in FY 2009	Actual FY 2009
Concepts	<u>Benefit</u> <ul style="list-style-type: none"> • Number of new/enhanced programs, products and business processes launched • New revenues generated 	Establish baseline in FY 2009	Actual FY 2009
	<u>Financial/Human Resources</u> <ul style="list-style-type: none"> • ASME \$ invested and outside \$ leveraged • FTEs engaged in innovation 	Establish baseline in FY 2009	Actual FY 2009

Next Steps

- Integrate BOG feedback
- Innovation system plan and budget to be presented to BOG for review and approval in June 2008.

Innovation System Implementation Schedule

(Fiscal Year 2009)

Overview:	Q1	Q2	Q3	Q4
<u>Sustaining Innovation</u> <ul style="list-style-type: none"> Sustaining Innovation Committee est. Customer Segment Teams launched Voice of Customer Projects begin 				 
<u>Breakthrough Innovation</u> <ul style="list-style-type: none"> Breakthrough Innovation Committee est. Innovation Office staffing Projects begin 	 			
<u>Innovation Portal launch</u>				
<u>Communication</u>				
<u>Training</u>				
<u>SPGF</u> <ul style="list-style-type: none"> Last SPGF awards GMC sunset 		 		

Evaluation Criteria for Breakthrough Innovation

1. Strategic Fit: Does the idea support and build upon ASME's strategic objectives?
2. Fit with Core Competencies: Does the idea leverage existing or latent competencies and, if not, are the competencies available to ASME in a way that provides competitive insulation (ownable space)?
3. Meaningful Market: Does the idea solve a problem or address an unmet need for a market, and is that market viable (willing to buy the product or service) and at least stable or growing at a size significant enough to support a new business platform?

and/or

4. Mission Oriented: In lieu of a financial ROI, does the idea or product support the mission (members) of ASME?