

## ASM International **2011 Strategic Plan and Progress Report**





# The Value of All Things Material

ASM International's commitment to strategic planning has resulted in bold new initiatives aimed at the future of materials science. Some of these initiatives are in early stages of development; others are beginning to demonstrate their potential. All these products and initiatives are critical to our society's success.

ASM is already the provider of high and undeniable VALUE to our members and to the broader materials community, both individuals and businesses.

## As our value proposition states:

**ASM International** serves materials professionals, nontechnical personnel, and managers worldwide by providing high-quality materials information, education and training, networking opportunities, and professional development resources in cost-effective and user-friendly formats. ASM is where materials users, producers, and manufacturers converge to do business.

We are quickly becoming an integral part of daily job performance and business activities. Our goal is to become the resource that large numbers of people will access not just a few times a month but one they will use weekly or even daily.

This strategic update has been created to engage you, the members of ASM International, in these efforts. We have ambitious and aggressive plans and we need your participation as volunteer leaders to commit to the development and implementation of these plans in order to succeed.

## Lifelong Learning and Education

Lifelong learning provides a vital link to the future of materials science and engineering. Looking at it from a macro life cycle approach, it addresses the needs of students, faculty, and the ongoing professional development needs of materials professionals including credential opportunities.

## Content is "Everything Material"

ASM International has a strong history as a resource for high-quality materials science and engineering content. The majority of this content has been created through a framework that enables members and volunteers to capture and share their knowledge and expertise. Historically ASM has also formed strategic partnerships with other organizations to increase content assets available to the greater materials community.

With advances in web infrastructure and online networks, and based on ASM's work to create a strong technology environment, ASM has the opportunity to further expand its position to provide content assets that are "Everything Material."

## Emerging Technology

To keep up with the changing needs of our members and other professionals, we have identified materials-related areas where rapid changes and developments are taking place, and we are working to disseminate authoritative and useful knowledge related to these technologies.

## Volunteerism

Volunteers provide the energy that propels ASM at the chapter level as well as the national level. Not only are volunteers the leaders of our society, they are the foundation for developing new content, products and services that our members and customers need and value. As with all volunteer-driven organizations, we face challenges in bringing new volunteers to our society and our chapters — challenges that involve not only attracting new volunteers, but helping them to stay motivated, connected and feel appreciated for their contributions.

Our Strategic Planning process has identified these opportunities and ongoing review has kept the Plan relevant. It's up to all of us.

**Mark F. Smith, Ph.D., FASM**  
President, 2010 - 2011

**Stanley C. Theobald**  
Managing Director



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*We are quickly becoming an integral part of daily job performance and business activities. Our goal is to become the resource that large numbers of people will access not just a few times a month but one they will use weekly or even daily.*



# Lifelong Learning and Education



The Lifelong Learning and Education initiative provides a vital link to the future of materials science and engineering. Looking at it from a macro life cycle approach, it addresses the needs of students, faculty, and the ongoing professional development needs of materials professionals, including credential opportunities.

## Action Plan

### University and College Level

#### Critical Issue

College students require educational support, encouragement and outreach to become dedicated, participating members of the professional materials science community. Providing this support is a road to building the future core of the society.

#### Strategic Objective

Make ASM International the essential community/resource for faculty and students facilitating their academic success and preparing them for an active professional membership within the society.

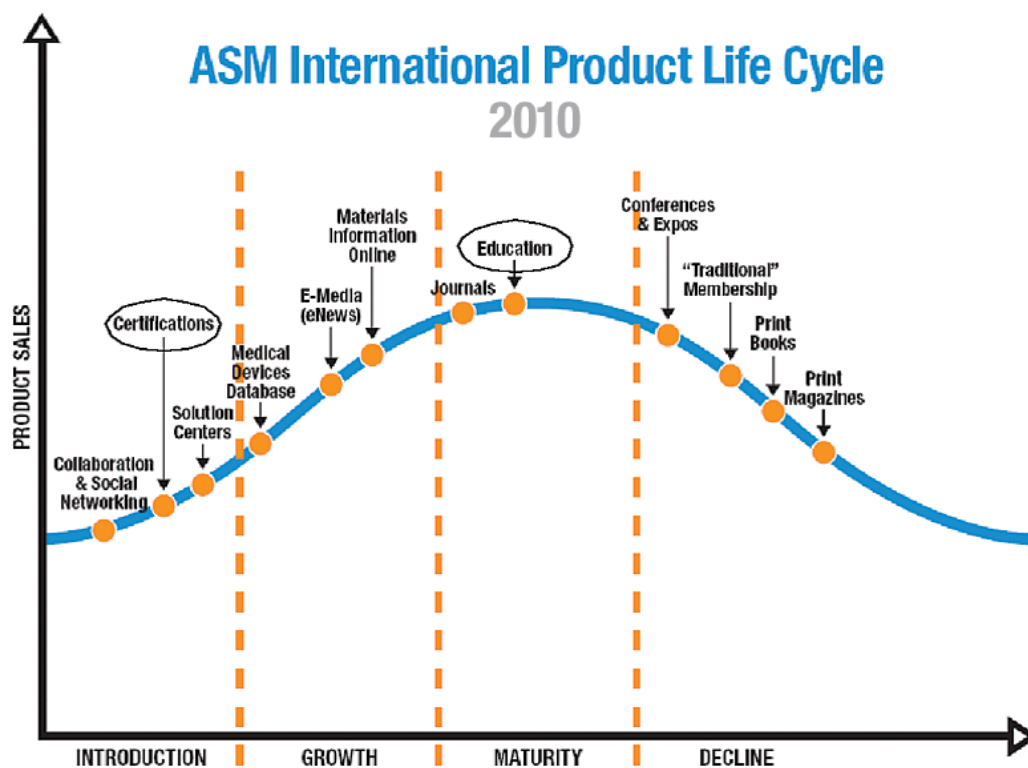
## Professional Development

#### Critical Issue

Expansion of knowledge in all scientific areas has taken place over the past several decades. It is becoming increasingly difficult for individuals to master the full depth and breadth of knowledge that is encompassed in formal education at any level, and to remain current in all aspects of relevant technology. Lifelong Learning and Education is a means by which our members remain technically current and are able to advance their career at any point in their professional life cycle.

#### Strategic Objective

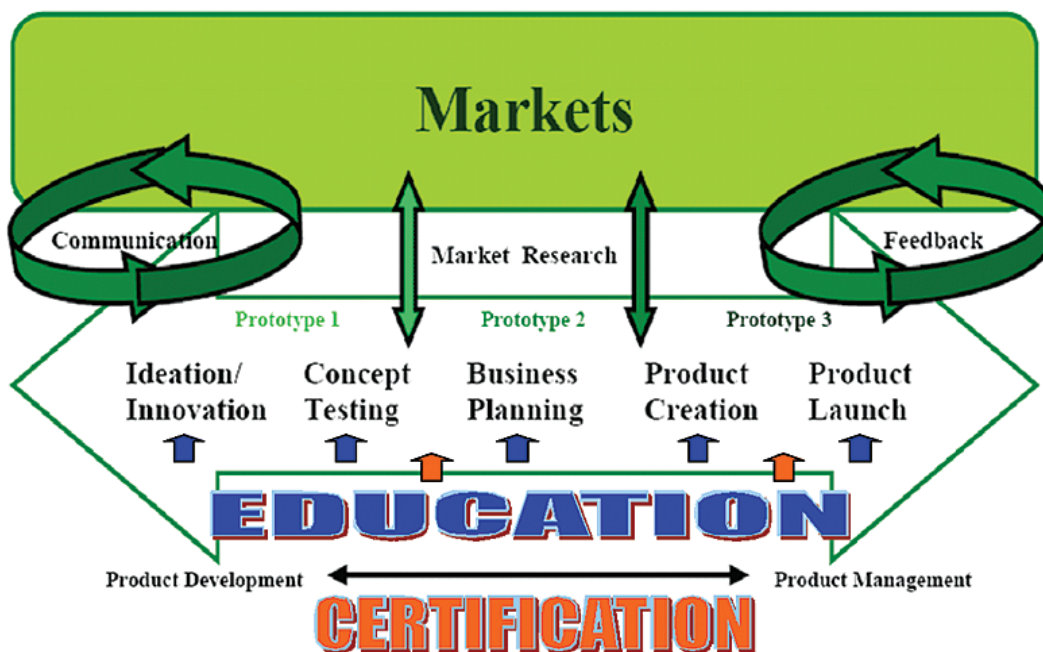
Define, develop, test and deliver programs, products and services through educational outreach opportunities providing value for members of the materials community throughout their personal and professional career – resulting in the cultivation of new members and growing revenues to support ongoing product development, review and revision.



# Lifelong Learning and Education

## Where Are We in the Product Development Process

### ◆ ASM Product and Services Development ◆



ASM International has a network of over 100 Student Chapters located around the world. In partnership with our Material Advantage Partners (ACerS, AIST and TMS), we're reaching more than 3,000 students and hundreds of faculty members.

The Lifelong Learning and Education action plan provides the touchstone for ASM's professional education growth strategy. The need for quality, relevant educational products and services continues to grow. The materials community is demanding more modern methods of delivery, lower cost training options, and customized training that meets specific needs. A creative growth plan has been developed with five growth initiatives identified. These five growth initiatives are focused on moving the Education business from maturity to growth.

The Education business area is engaged at the Business Planning level of the ASM Product and Services Development Model; however, there are elements of the education growth plan that are targeting Ideation/ Innovation, Concept Testing, Product Creation and Product Launch. To meet the growing needs of our members and the materials community, active engagement in all phases of the product development cycle is required.

The Lifelong Learning and Education action plan provides opportunities for technology and industry areas to capitalize on their own qualification factors and expand in recognition, demand and usage.

## Product Portfolio

University and College Level	Professional Development	Certification
Student Chapters	Lectures/Laboratory courses	Certified Thermal Spray Operator (CTSO)
Scholarships	Customized In-Plant courses	Additional Programs are being developed to complete suite of certification Products
Travel Grants	Online courses	
Student Board Member Program	Self-study materials (Learning Management System and CD-ROM)	
Materials Demo in a Suitcase	DVDs	
Student Programs, Contests and Recognition	Webinars	
Additional resources such as outreach videos		
Curriculum resources for Community Colleges		



# Lifelong Learning and Education

## SMART Objectives

### University and College Level

- Form new ASM College and University Committee
- Identify metrics that ensure value creation for students and faculty
- Identify metrics that show increased participation by students in the Society
- Develop project plan to deliver value propositions

### Professional Development Level

- **Enhance existing course material** to ensure content accuracy while incorporating new technology. The result will be engaging courses that present material in multiple modes of delivery that address a variety of learning styles. **Seven (7) Courses revised by 2012.**
- **Expand materials covered** by evaluating the Content Committee's input, conducting market research in targeted areas to identify opportunities, and engaging subject matter experts to develop new educational offerings. **Eight (8) New Courses developed by 2012.**

- **Obtain return on Learning Management System investment** by converting existing material to online courses, developing new online courses, and hosting additional courses.
- **Package and bundle** education products with other business area products to drive down costs while increasing customer value.
- **Provide professional development courses** to capitalize on the shift of training funds to nontechnical topics while offering a recognized branded product line at a reasonable price point.

### Certification

- **Three (3) New Certification Products developed and launched by 2014**
- **Revenue generated in excess of \$1.3 million by the end of 2014**
- **Over 800 certification exams administered by the end of 2014**

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## Project Plan – Professional Development

Task	Target Date
Partner with professional development experts to provide the materials community with quality nontechnical training in a cost-effective format.	4th Qtr. 2010
Establish processes and procedures that enable quarterly content and delivery mode revision of at minimum of one course per quarter.	1st Qtr. 2011
Review content gap analysis and market research results to identify opportunities and engage subject matter experts. Launch at least two new courses per quarter.	1st Qtr. 2011
Offer content online through the Learning Management System to provide high quality, lower cost, self-paced learning to meet the needs of the global materials community.	Ongoing
Create educational offerings complete with text book, lecture material, and online learning components.	2nd Qtr. 2011

## Project Plan – Certification

Task	Target Date
Complete development of TS Performance Exams	4th Qtr. 2010
Identify 2nd Certification target area	4th Qtr. 2010
Present 'Funding Request' for next Certification Product	4th Qtr. 2010
The Certified Thermal Spray Operator Program to be launched	1st Qtr. 2011
Development of 2nd Certification Product	2nd Qtr. 2011
Launch 2nd Certification Product	4th Qtr. 2012
Development of 3rd Certification Product	1st Qtr. 2013
Launch 3rd Certification Product	3rd Qtr. 2014

## Ownership

College and University Committee for College Initiatives

Education Committee for Professional Development Initiatives

Certification Initiatives:

ASM Certification Committee

TSS Certification Committee

Affiliate Societies



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# Content Is Everything Material

ASM International has a strong reputation as a resource for high-quality materials science and engineering content. The great majority of this content has been created through a framework that enables ASM members and volunteers to capture and share their knowledge and expertise. ASM also has a history of partnering with other organizations to increase the content assets available to the materials community.

With advances in web tools and online networks, and based on ASM's work to create a strong technology infrastructure, ASM has the opportunity to further expand its position to provide content assets that truly are "Everything Material."

We will do this by:

- Creating an ASM Content Roadmap that inventories existing content and provides an action plan for filling key gaps.
- Implementing process improvements and applying new online tools to increase volunteer involvement in and satisfaction with ASM content development activities.
- Developing new partnerships with leading materials organizations and publishers so that broader subject areas and deeper pools of content can be accessible via ASM and new eNetwork partnership sites.

## Action Plan

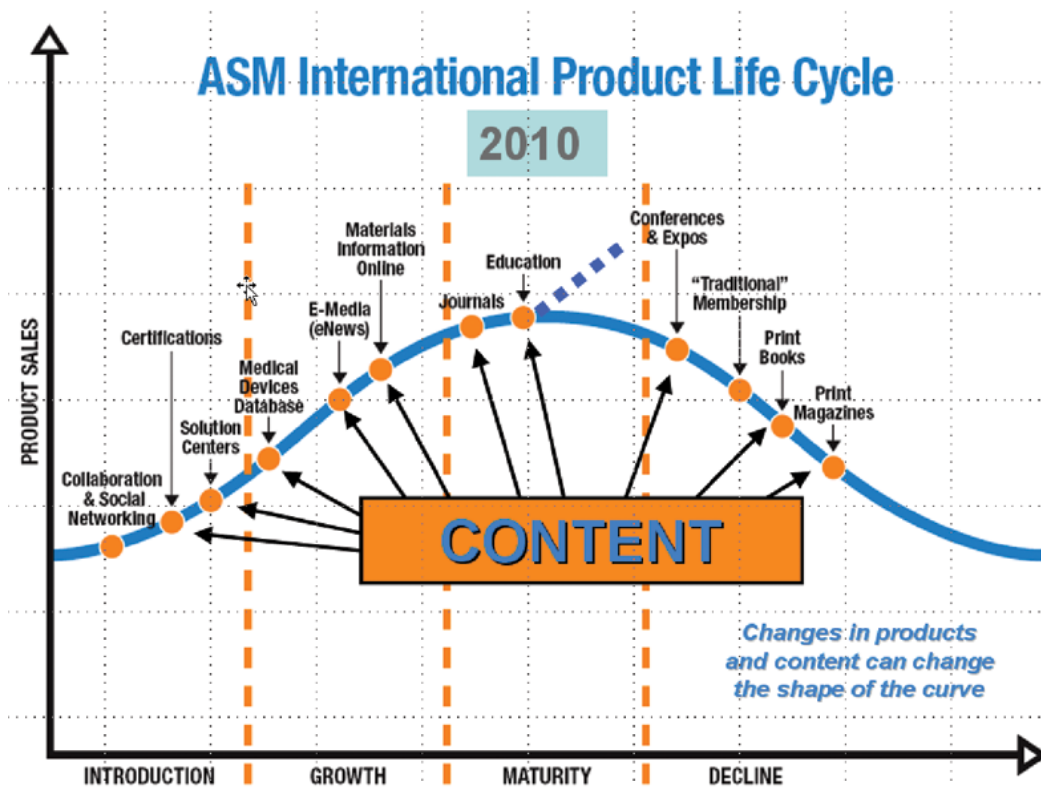
### Critical Issue

ASM must expand its position and become the global resource for quality materials information.

### Strategic Objectives

1. Identify, maintain, and update ASM Core Content.
2. Identify, acquire, and partner to expand ASM's content coverage to comprehensively represent "Everything Material."

## Product Life Cycle



Content is a fundamental component of almost every ASM product and service. Having comprehensive and up-to-date content sets can change the shape of the life cycle curve (extend the growth and maturity phase) for content products and also provide opportunities for additional new products.



# Content Is Everything Material

## Product Portfolio

The work of the ASM Content Committee supports the full scope of existing ASM content products:

### Reference Information and eNetwork Products

- ASM Handbooks Online and print
- Technical Books and eBooks
- Materials Information Online Databases
- Materials for Medical Devices Database
- Corrosion Analysis Network
- Energy Materials Network
- Mtrl – Materials for Industrial Design Website
- ASM Global Community Documents Center

### Journals

- Metallurgical & Materials Transactions A&B (w/TMS)
- International Materials Reviews
- Journal of Materials Engineering and Performance
- Journal of Thermal Spray Technology
- Journal of Failure Analysis and Prevention
- Journal of Phase Equilibria and Diffusion

### Magazines and eNewsletters

- Advanced Materials & Processes Magazine and eNews
- HTPro
- MPMD eNews
- Electronic Device Failure Analysis Magazine and eNews
- Affiliate Society publications and newsletters

## SMART Objectives

- Increase the rate of revenue growth from content products
- Increase the total number of documents stored in the ASM Content Management System

## Project Plan

Task	Target Date
Create a comprehensive inventory and gap analysis of ASM content assets	October 2010
Establish ASM Content Roadmap with overall content priorities in specific subject/market areas and action plan	December 2010
Implement new streamlined online content acquisition and review processes	June 2011

## Ownership

ASM Content Committee

## Events

- Materials Science & Technology (w/ACerS, AIST, and TMS)
- ASM and Affiliate Society Events
- Conference proceedings

## Education

- ASM in-person, online, and custom training
- Education course materials



*With advances in web tools and online networks, and based on ASM's work to create a strong technology infrastructure, ASM has the opportunity to further expand its position to provide content assets that truly are "Everything Material."*

- Integrate existing ASM materials databases on a single platform and increase the rate of new data addition and publishing
- Increase volunteer participation and volunteer satisfaction in content development activities
- Fill content gaps as they are identified in ASM Content Roadmap

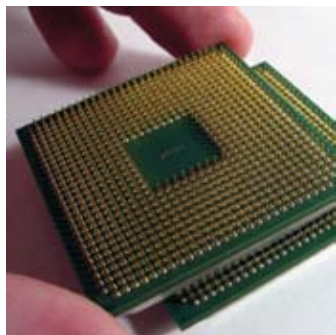


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# Emerging Technology



Led by the ASM New Products and Services Committee, ASM's commitment to Emerging Technology has shown consistent progress.

Nearly all of the Emerging Technology ideas that have become ASM products were suggested directly by our members and volunteers.

A good example of this is our MPMD initiative, now in its eighth year of providing needed information and knowledge that bridge the materials gap for medical device designers.

The launch of the ASM/Mtrl "Material on Materials" website for industrial design professionals brings our materials knowledge to a fast-growing community in an entirely new way.

The Corrosion Analysis Network was recently launched and is already growing in commercial acceptance, with the Energy Materials Network fast on its heels.

Taking ASM's strengths in finding high quality information and providing it in the way it is needed – and adapting those strengths to new areas of Emerging Technology – enables us to reach out to new members and audiences.

## Action Plan

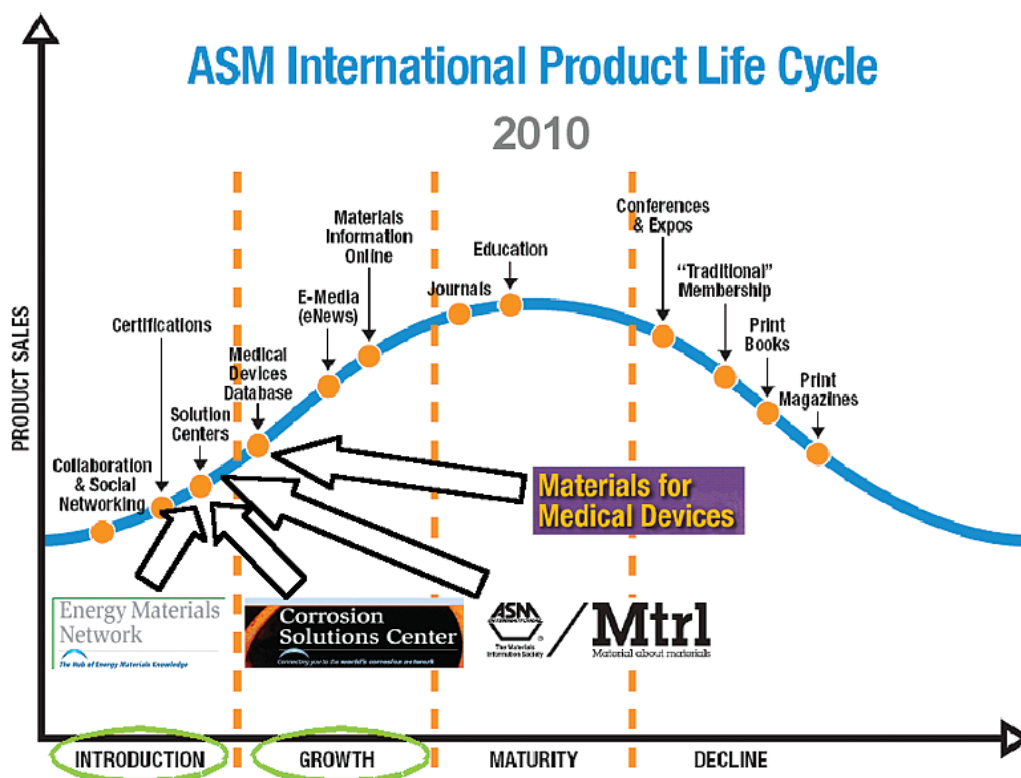
### Critical Issue

Rapid changes and developments in materials related manufacturing technologies are significantly impacting the individuals and organizations served by ASM and creating opportunities for ASM to lead the advancement of knowledge related to these technologies.

### Strategic Objective

Identify rapid changes and developments in materials science, engineering and related manufacturing technologies. Gain a thorough understanding of the needs of those who strive to keep in front of the rapid changes to know how we should take advantage and create momentum and lead the dissemination of knowledge related to those technologies. Create an environment for the interaction of science, technology and innovation. Strengthen the collaboration among academic, industrial and government centers.

## Product Life Cycle

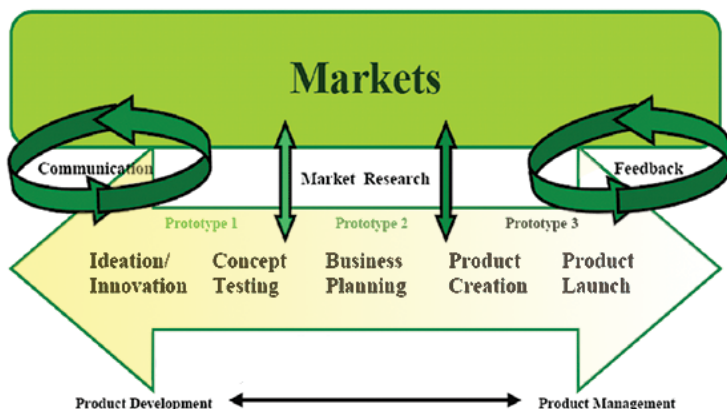




# Emerging Technology

We are in the feedback loop of early product launch, listening to customers to understand their workflows and enhance product value

♦ ASM Product and Services Development ♦



- Qualitative Market Research
  - VOC to understand customer workflows.
- Develop Phase II Scope and Requirements
- Enhance
- Launch and synergize with other offerings



The emerging products are at the critical stage of their product lifecycle – crossing from introduction to growth. They need to transition from the earliest adopters to the early majority. This requires our product developers to understand the target customer workflows so that they can enhance the products early on to fit naturally into product workflows and provide superior value to all other alternatives.

## Product Portfolio

### Materials and Processes for Medical Devices™ (MPMD)

- Conference/Exposition
- Training Seminars
- Database
- eNewsletter
- Books

### Corrosion Analysis Network

- Community Website
- Materials Database
- Collaboration with NACE

### ASM/Mtrl™ (Materials for Industrial Design)

- Community Website
- Materials Database
- Workshop Training

### Energy Materials Network

- Community Website
- Materials Database
- Journal (planning stages)
- Collaboration with TMS

## MEMS

- Training
- Packaging Database

We are utilizing the following criteria for industry/technology selection.

- Leverage and improve existing New Products and Services (NPS) product development documentation and templates:
  - Quick Technology Assessment
  - Market Research RFP
  - Business Market Plan
  - Funding Proposal
  - Project Management
  - Statement of Work
  - Requirements Document
- Project management milestones and metrics. Report on progress against the goals set forth.
- Financial metrics, goals and interim reporting procedures.
- Seek funding for projects requiring \$50K+ for product design, build and launch.

# Emerging Technology

## SMART Objectives

(Thousands of \$)						
Year	2009	2010	2011	2012	2013	2014
Medical Devices Portfolio	352	186	550	400	600	440
Corrosion Analysis Network	n/a	10	60	500	750	1,000
Energy Materials Network	n/a	10	15	150	240	340
Industrial Design	n/a	0	15	150	250	440
<b>Total Revenue</b>	<b>352</b>	<b>186</b>	<b>640</b>	<b>1,200</b>	<b>1,840</b>	<b>2,220</b>

*Nearly all of the Emerging Technology ideas that have become ASM products were suggested directly by our members and volunteers.*

## Project Plan

Task	Target Date
<b>Materials and Processes for Medical Devices:</b>	
1. Understand market – current state and future trends <ul style="list-style-type: none"> <li>Gather voice of customer</li> <li>Implement features indicated by market research</li> </ul>	4th Qtr. 2010 - 1st Qtr. 2011 4th Qtr. 2010 1st Qtr. 2011
2. Establish Portfolio Brand and create market awareness	1st Half, 2011
3. Become ingrained in the NE Ohio Biomedical community as a known and respected entity	1st Half, 2011
4. Develop strategic partnerships which provide value	2011 and beyond
5. Develop and execute aggressive product portfolio sales and marketing plan to capture increased revenue/contribution	4th Qtr. 2010 - 1st Qtr. 2011
6. Evaluate Pricing Strategy and adjust if required	1st Qtr. 2011
7. Determine the value of creating an external Community	1st Qtr. 2011
<b>Corrosion Analysis Network:</b>	
1. Product Launch	1st Qtr, 2010
2. Expert Panel Feedback	1st Qtr, 2010
3. Follow methods of the Value Transformation Workshop to Discover Product Enhancements – such as Analysis <ul style="list-style-type: none"> <li>One on One interviews of potential customers in target markets</li> </ul>	4th Qtr, 2010
4. Implement Analysis Enhancements discovered through market research	1st Half, 2011
5. Market & Sales Plan Execution	Ongoing
6. Add New Content Partners	Ongoing
<b>Energy Materials Network:</b>	
1. Soft Launch of EMN - TMS annual meeting <ul style="list-style-type: none"> <li>Content partners: ASM, TMS, SAE, Springer</li> </ul>	1st Qtr. 2010
2. Commercial launch of Phase I scope	2nd Qtr. 2010
3. Collaboration work area for Energy Materials Blue Ribbon Panel	2nd Qtr. 2010
4. Collaboration work area for Energy Materials technical working groups	3rd Qtr. 2010
5. Value Transformation Market Research for Phase 2 scope and development of Market Requirements	4th Qtr 2010
6. Develop and Launch Phase 2 functionality	1st-2nd Qtr, 2011
<b>Industrial Design Center /MTRL</b>	
1. Increase Site Traffic via SEO and online advertising	4th Qtr, 2010
2. Improve Content <ul style="list-style-type: none"> <li>Greatly expand number of materials <ul style="list-style-type: none"> <li>Automated process to include new materials from internal and external sources</li> <li>Harvest materials from other ASM Databases</li> <li>Solicit and import materials from materials producers</li> </ul> </li> <li>RSS Feeds</li> <li>Twitter</li> <li>Collaborate with materials producers and experts</li> </ul>	4th Qtr, 2010 4th Qtr, 2010 - 1st Qtr, 2011 4th Qtr, 2010 – Ongoing 1st Half 2011 1st Half 2011 Ongoing
3. Uncover customer focused feature/content improvement via Market Research	4th Qtr, 2010
4. Collaborate with Design oriented sites, design schools, events and materials experts	Ongoing

## Ownership

New Products and Services Committee



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# Volunteerism



This initiative may be the most important program for the future of ASM. Without volunteerism, nothing else is possible.

This effort focuses on better serving and allocating the remarkable volunteer network on which ASM relies so heavily, and expanding the base of volunteers in new technical areas.

Volunteers provide the energy that propels ASM at the chapter level and at the national level. Not only are volunteers the leaders of our society, they are the foundation for developing new content, products and services that our members need and value. As with all volunteer-driven organizations, we face challenges in bringing new volunteers to our chapters/society. It's a challenge that involves not only attracting new volunteers, but helping them to feel connected and stay motivated.

## Action Plan

### Critical Issue

ASM must engage, nurture, manage and grow volunteer resources to sustain itself and expand into new emerging technologies and markets.

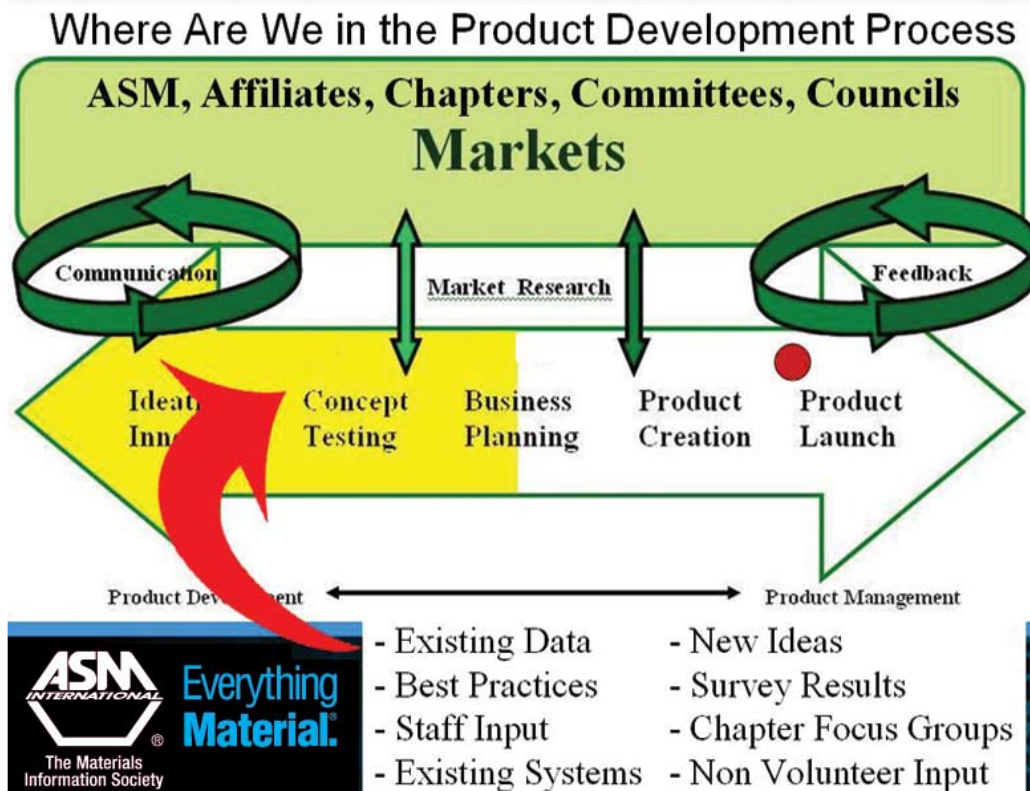
### Strategic Objective

Define and implement effective and sustainable processes that ensure that the society optimizes volunteer resources for the good of the materials community as well as the individual volunteer.

## Product Life Cycle



# Volunteerism



Unlike a typical product life cycle, volunteerism is a necessary, foundational component of ASM's long term success. It is essential, and in order to maintain the growth cycle of products and services in other areas, volunteerism must continue to be a strong focus.

Having taken our suite of sample products for review at Leadership Days 2010, we garnered positive feedback on the effectiveness and are now requesting the necessary resources to deliver on our promise. Funding was approved by the ASM Finance Committee and Board of Trustees in October 2010 which allows for the delivery and implementation of volunteerism resources and programs.





# Volunteerism



*This initiative may be the most important program for the future of ASM. Without volunteerism, nothing else is possible.*

## Product Portfolio

### Recruitment/Retention

- ASM Volunteer Connection Website
- ASM Volunteer Handbook
- ASM Volunteer Newsletter
- ASM Volunteer Webinar Series

### Recognition

- ASM Volunteer Recognition Program
- ASM Volunteer Member Profiles in AM&P

## SMART Objectives

### Volunteerism Metrics

#### (How to measure Success of New Programs)

- **Increase volunteerism levels by 25%** (based on the 2009 web survey), 24% of respondents volunteered for ASM in some capacity...**the new target is 30%** (2012 web survey) – *increased volunteerism should also be reflected in reduction of potential volunteers pool* (based on the 2009 web survey, 60% of no-volunteers were willing to volunteer in the future).
- **Increase volunteerism satisfaction by 10%** (based on the 2009 web survey), a total of 82% of volunteers said ASM met or exceeded their expectations – 62% met expectations; 20% exceeded expectations...**the new target is 90%** (2012 web survey).

## Project Plan

Task	Target Date
Prepare and Submit Development Fund Request	October 2010
Continue Member Profiles in AM&P	October 2010
Utilize Resource Allocation to Begin Work <ul style="list-style-type: none"> <li>• Market and Utilize Connection Website</li> <li>• Publish and Distribute Handbook</li> <li>• Begin Development of eNewsletter</li> <li>• Begin Development of Content for all Products</li> <li>• Begin Development of Webinar Series</li> </ul>	January 2011
Engage Audience	February 2011
Measure Success	2012 or 2013

## Ownership

ASM Volunteerism Committee



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## 2010-2011 Board of Trustees



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# ASM International, The Materials Information Society



## The Value of ASM

ASM International serves materials professionals, nontechnical personnel, and managers worldwide by providing high-quality materials information, education and training, networking opportunities, and professional development resources in cost-effective and user-friendly formats. ASM is where materials users, producers, and manufacturers converge to do business.

ASM information resources enable members, customers, and workgroups to execute critical activities and workflows with more confidence, at faster speed to solution, at lower cost, and with greater success.

ASM members and customers will find their experiences to be:

- *Personalized* – tailored to their unique profile requirements.
- *User friendly* – easy to understand, flexible, and transparent.
- *Surprisingly easy* – fast, cost effective, and low risk.
- *Results-driven* – proven to deliver individual, workgroup, and enterprise success.
- *Business compliant* – consistent with business-process standards for quality materials information.

## Our Mission

ASM International benefits the materials community by providing scientific, engineering and technical knowledge, education, networking and professional development.

## Our Vision

To be the leading resource for the advancement of materials knowledge in education, industry and society.

## Our Core Values

- Exceptional member/customer service and input.
- Stewardship of finances.
- Integrity in all operations.
- Benefits of a diverse worldwide community of volunteers.
- Continuous improvements and an adaptable and flexible organization.
- The importance of education, experience and lifelong learning.

