Systematic Innovation of Products, Processes, and Services

This Program is in the Executive Certificate in Technology, Operations, and Value Chain Management track

“ This course has made me rethink the current paradigm of product development. It has opened my eyes to a world of alternatives.”
— Steve Duquette, Director of Engineering, Respiratory Care Division, VIA SY S Healthcare Inc., U.S.

Program Details
Design and development projects today face a complex landscape of interrelated challenges, including technological feasibility, customer desirability, business viability, and environmental sustainability. This program explores the process of systematic innovation in product development, business processes, and service design, with a special focus on the end-to-end design and development process, beginning with creation and ending with commercialization and ongoing product/service leadership.

The program introduces a structured approach to design and customer analysis processes that draws on important trends that have become essential to successful innovation in today’s businesses: the digitization of all business processes; the blending of product and service into integrated solutions; considerations around environmental sustainability; and the use of globally-distributed teams.

Participants will learn how to lead these innovation processes in a fluid world where the best-made assumptions can, and often do, change midstream. Participants will also have an opportunity to discuss these frameworks and apply them to their own personal responsibilities and experiences.

Takeaways
The concepts and frameworks covered in this program will enable participants to understand:

- Why the process of innovation can be systematic—structured, reliable, and repeatable
- When it makes sense for entrepreneurial firms to compete directly with established firms
- How to evaluate market opportunities and identify customer needs in a systematic way
- What actions you must take to capture some of the value you create with new products and services
- How to structure an effective concept development process
- How design iterations, project milestones, and reviews can be used to manage a staged or spiral process
- How products and processes can be designed for environmental sustainability
- How design of services differs from new product development
- What is the impact of Generation Y employees on the creative process

Participants
Systematic Innovation of Products, Processes, and Services is for people whose jobs are to create new products, new business processes, and new services, including, but not limited to:

- VP of Product and Service Management
- Business Development Manager
- Director of Technology
- Director of Process Engineering
- Design Director
- Development Manager
- Director of Product and Service Marketing
- Development Engineering Manager
- Director of Product Engineering
- Innovation Manager
- Engineering Manager
- Director of Industrial Design
- Director of Product and Service Development
- Director of Process Quality
- VP of Product Planning

The program is suitable for individuals, for teams of two or three, or for a complete program or service development team.

http://executive.mit.edu/ipp
# Systematic Innovation of Products, Processes, and Services

## Sample Program Schedule

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
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</thead>
<tbody>
<tr>
<td>9:00 AM–10:30 AM: Introduction to Innovation Processes</td>
<td>9:00 AM–10:30 AM: Customer Needs Analysis Methods</td>
<td>9:00 AM–10:30 AM: Design for Environmental Sustainability</td>
<td>9:00 AM–10:30 AM: Managing Complex Technical Projects—DSM Methods</td>
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<tr>
<td>11:00 AM–12:30 PM: Technology Strategy</td>
<td>11:00 AM–12:30 PM: Systematic Creativity Methods</td>
<td>11:00 AM–12:30 PM: Product and Service Leadership</td>
<td>11:00 AM–12:30 PM: Staged vs. Spiral Development</td>
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<tr>
<td>1:30 PM–5:00 PM: Design Thinking Skills and Systematic Innovation</td>
<td>1:30 PM–5:00 PM: Market Strategy</td>
<td>1:30 PM–5:00 PM: Capturing Value from Innovation</td>
<td>1:30 PM–5:00 PM: R&amp;D Organization and Leadership</td>
<td>1:30–2:30 PM: Technology and the Future of Design—Process and Culture</td>
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<td>5:15 PM–7:00 PM: MIT Campus Tour</td>
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## Watch the Innovation@Work Webinar

In his webinar, “Systematic Innovation by Design,” MIT Sloan Professor Steven Eppinger explores how the essential elements of “design thinking” can be applied with great success to product and service innovation. Eppinger is a pioneer in the development of the widely used Design Structure Matrix (DSM) method for managing complex system design, and is the coauthor of one of the most widely used textbooks on product design and development. Tune in to this and other webinars at [http://executive.mit.edu/webinars](http://executive.mit.edu/webinars).

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### Program Faculty

Please note that faculty are subject to change and not all faculty teach in each session of the program.

- Pierre Azoulay
- Steven Eppinger, Faculty Director
- Ray Reagans
- Catherine Tucker

### Great course, great content, and excellent presentations. I plan to send two or three members of my team to the next session.”

—Thomas Geehan, PhD
Director of Technology
Drilling Waste Management
M-I Swaco, U.S.
Read this review and others online.

### The faculty has a deep experience in real-life problems and [focuses] on important trade-offs that are crucial for successful product development process. The applicability of the gained knowledge is outstanding.”

—Mariusz A., Past Participant
Read this review and others online.

### Contact Information

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