

# PPC

ASME Professional  
Practice Curriculum ©

*Welcome to the Members Only Edition of the PPC! Our goal is to help you be better prepared for entry into and early advancement in the engineering profession.*

*This edition is a free downloadable sampler that includes the following modules:*

- *Introduction to Intellectual Property (Business & Legal Series)*
- *Leadership Styles and Attributes (Management & Leadership Series)*
- *Effective Technical Presentations (Communications Series)*
- *Product Management (Product Management Series)*
- *Policy Gear (Business and Legal Series)*

*To download the complete curriculum (12 series of modules) for free, visit our website at [www.professionalpractice.asme.org](http://www.professionalpractice.asme.org).*

## Career Transition Series

- Studying Engineering
- Graduate Studies
- Introduction to an Engineering Career
- Mechanical Engineering and Multidisciplinary Thinking
- Engineering Ethics

## Industry Series

- Career Planning: Choosing an Industry
- Aerospace
- Automotive
- Consumer Sporting Goods
- Energy
- Healthcare

## Business & Legal Series

- Entrepreneurs: Business Planning
- Engineering Public Policy - Policy Gear
- Introduction to Intellectual Property
- Patent Law
- Codes and Standards

## Management & Leadership Series

- Leadership Principles
- Leadership Styles and Attributes
- Team Building
- Management Skills
- Workplace Diversity
- Mentoring
- Critical Thinking and Problem Solving

## Communications Series

- Communicating to Non-Technical Audiences
- Conducting Effective Meetings
- Effective Technical Presentations
- Negotiation
- Communication Skills

## Project Management Series

- Project Management
- Project Controls
- Contracting Organizations and Options

## Entrepreneurial Series

- Business Incubators
- High Tech Startups

## Engineering Design Series

- Conceptual Design
- Analytical Design
- Parametric Design

## Product Management Series

- Product Planning
- Product Development
- Product Management
- Systems Engineering
- Safety and Risk Assessment

## Sustainability Series

- Sustainability: Intro
- Sustainability: Engineering Tools

## Writing Winning Proposals Series

- An Introduction
- The Technical Proposal
- The Cost Proposal
- Grant Writing for Engineers

## Sales and Marketing for Engineers

- Sales for Engineers
- Marketing Technical Products

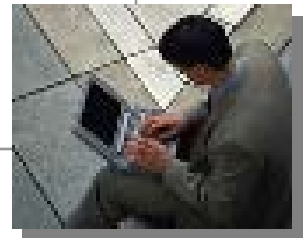
**Members Only  
Edition**

# PPC

ASME Professional  
Practice  
Curriculum<sup>®</sup>

## Business & Legal Series

Volume 6



Members Only  
Edition

**ASME**  
SETTING THE STANDARD

## The ASME Professional Practice Curriculum:

*Welcome to the printed version of the PPC Online, a program of study for engineering students and early career engineers that supplements the formal college/university engineering curriculum. The PPC aims to better prepare you for entry into and early advancement in the engineering profession.*

**Visit us at <http://www.professionalpractice.asme.org>**

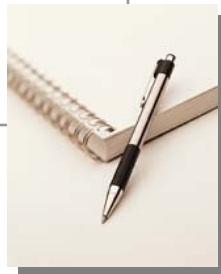
### **For Faculty**

*It is a major aim of ASME to help colleges of engineering guide the development of students and teach the principles of engineering practice and professionalism without overburdening an already full undergraduate curriculum. The PPC Online is meant to supplement the formal college/university engineering curriculum and aid engineering faculty in better preparing graduates for entry into and early advancement in the engineering profession. The modules cover a diverse array of topics, some corresponding to the ABET a-k criteria, designed to be suitable for assignment wherever appropriate in the engineering curriculum.*

*The ASME PPC Online is a joint project of the Center for Education and the Center for Professional Development, Practice and Ethics and is funded by the ASME Foundation.*

## The ASME Professional Practice Curriculum:

Volume 1	The Project Management Series
Volume 2	The Product Management Series
Volume 3	Writing Winning Proposals
Volume 4	The Engineering Design Series
Volume 5	Sustainability Series
Volume 6	Business & Legal Series
Volume 7	Entrepreneurial Series
Volume 8	Career Transition Series
Volume 9	Sales and Marketing for Engineers
Volume 10	Communications Series
Volume 11	Management & Leadership Skills Series
Volume 12	Industry Series



# The ASME Professional Practice Curriculum: Product Management Series

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## Members Only Edition

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- *Introduction to Intellectual Property (Business & Legal Series)*
- *Leadership Styles and Attributes (Management & Leadership Series)*
- *Effective Technical Presentations (Communications Series)*
- *Product Management (Product Management Series)*

**To access the full set of PPC downloads, please visit  
<http://www.professionalpractice.asme.org>**

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## Product Management

### Introduction

Product management addresses the lifecycle from preparing for introduction to retirement to ensure that products in the market will make the best possible contributions to revenue, profit, and growth. Launch activities happen throughout the development cycle, as marketing prepares and executes the internal and external activities to ensure a high impact result. Leading edge companies develop a well-articulated launch plan to ensure senior management buy-in and commitment for the resources necessary for a successful product launch.

It is also important to understand the product lifecycle to optimize products in the market and to make good product decisions about the future. Companies that have a clear product management process are able to focus resources to maintain products, retire products when appropriate, and gain essential information for strategic product planning and optimizing the portfolio.



### 1 Best Practices

Leading-edge companies proactively plan, evaluate and decide when to retire a single product or a product line. Best practices include:

- Creating a product lifecycle plan as part of the overall business plan.
- Conducting product lifecycle analysis to determine if products are in the growth, maturity or declining part of the lifecycle.
- Scheduling formal lifecycle reviews.
- Deciding to retire a product when profits fall below the minimum requirements. Proactively communicating with key customers, suppliers and partners to advise them of alternative solutions.

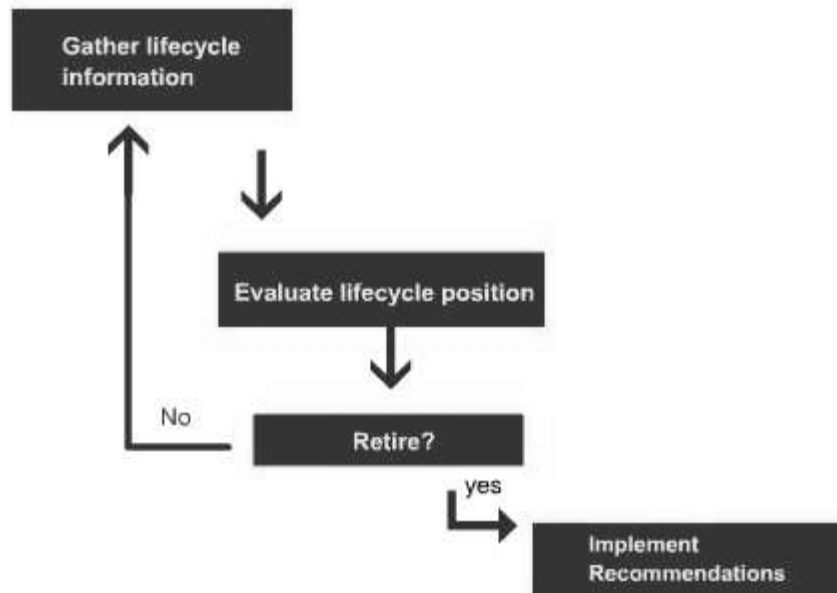
### 2 Roles & Responsibilities

- Marketing gathers and updates competitive product information and past, current, and projected sales volume, revenue and profit for the product or product line under consideration.
- Engineering updates the technology trends and analysis on competitive and alternative technologies.
- Product management completes the lifecycle analysis and makes the recommendation to maintain, retire or extend the product life.

## Product Management

### 3 Decision Flow

#### Manage Lifecycle Plan Through Retirement



### 4 How-To Plan

#### Step 1: Gather Lifecycle Information

- A) Gather and compile historical and projected sales revenue for the product or product line being evaluated. Look at sales records for the past 5 years and sales forecasts for the next 5 years.
- B) Review market size and trends over the same period as above. This information is sometimes available in your marketing department or usually found through secondary market research.

#### Step 2: Evaluate Your Lifecycle Position

- A) Enter annual sales information for your product compared to the market size. See: Template- Lifecycle S Curve
- B) Identify your products lifecycle position by comparing the two trends. (growth, mature, or declining) If both trends are positive, you are usually in a lifecycle growth stage. If both trends are flat, the lifecycle is mature. If both trends are negative the lifecycle is declining. See: Example- Lifecycle S Curve

Note: When the market is growing and your share is declining it is an indication that your product is losing its competitive advantage.

 **Product Management***Step 3: Decide on Action Plan*

- A) Evaluate the impact of product retirement in terms of business financial performance, manufacturing, market reaction and customer relationships.
- B) Make a recommendation to either extend the product line life or retire the product. Consider the impact of other products that are in development. See: Template - Lifecycle Plan
- C) Decide on a lifecycle action plan. See: Example - Lifecycle Plan.

*Step 4: Document and Implement Recommendations*

- A) Document and communicate the plan internally and to customers, suppliers and partners as appropriate.
- B) Remove retired products from your product portfolio of Products in the Market (PIMs).

**5** Critical Decisions

The key decision is to retire products and product lines that no longer provide the minimum required profitability levels established by the company.

**6** Overcoming Pitfalls*Historic Sales Data Not Available*

Identify markets or regions where good sales information exists and estimate for other areas using available market and competitive information.

*Sales Projections are Over-Optimistic*

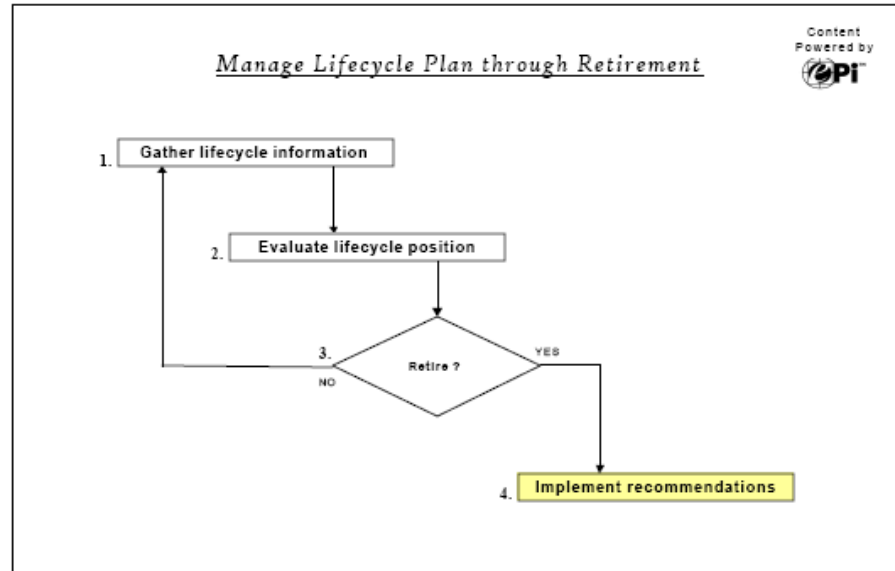
Compare to past sales data and question analysis if projected trend is suddenly reversed vs. history.

*Not Being Proactive*

Build lifecycle analysis as a key responsibility of product management.

*Underestimating Impact of Product Withdrawals*

Avoid the tendency to develop very exact financial models on inexact assumptions. The model should be understandable and usable by all members of the team.

 Product Management**How To:**  
Manage Lifecycle Plan through RetirementBig Picture  
Decision  
Flow

 Product Management

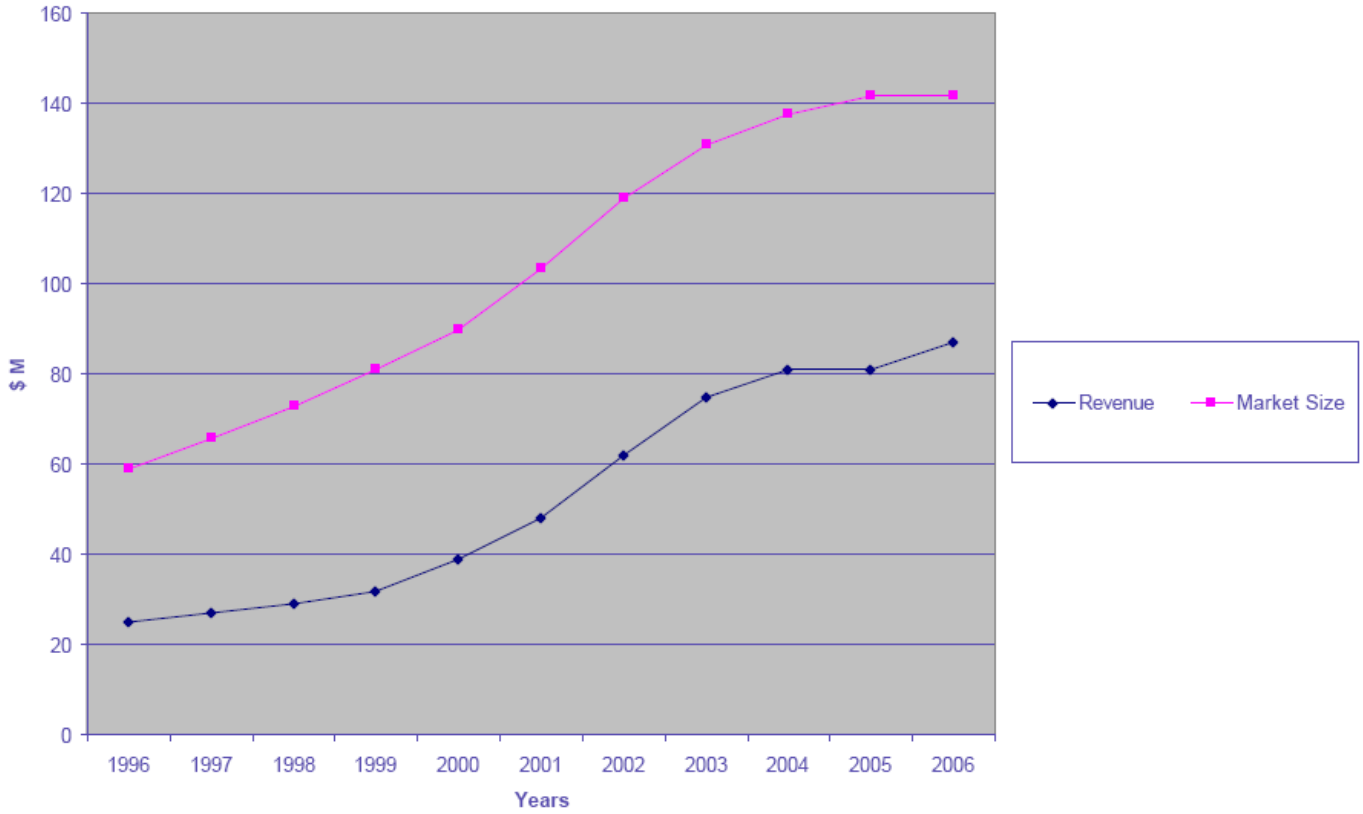
How To Steps	Activity	Strategies
	<b>Step 1.</b>  <b>Gather lifecycle information</b>	A) Gather and compile historical and projected sales revenue for the product or product line being evaluated. Look at sales records for the past 5 years and sales forecasts for the next 5 years.  B) Review market size and trends over the same period as above. This information is sometimes available in your marketing department or usually found through secondary market research.
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	<b>Step 4.</b>  <b>Document and implement recommendations</b>	A) Document and communicate the plan internally and to customers, suppliers and partners as appropriate.  B) Remove retired products from your product portfolio of Products in the Market (PIMs).

 **Product Management**

<b>Best Practice Knowledge Library</b>	<b>Description</b>	<b>Library Link</b>
	Evaluating product lifecycle position	<a href="#">Best Practice – Manage Lifecycle Plan through Retirement</a>
Gathering market and product information to determine lifecycle position	<a href="#">Example - Lifecycle S Curve</a>	
Documenting a lifecycle management action plan	<a href="#">Example – Lifecycle Plan</a>	
Templates for managing the lifecycle	<a href="#">Template- Lifecycle S Curve</a> <a href="#">Template – Lifecycle Plan</a>	

 Product Management

Lifecycle Curve - Vision 3 Mobile Phone Company



 **Product Management**

**Template - Lifecycle S Curve**

[See: How To- Manage Lifecycle Plan through Retirement](#)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
My Company's Product Revenue											
Market Size											

Our Lifecycle Position is: (check one)

Growth - If both your company and the market is growing

Mature - If the trends are flat

Decline- If the trends are negative

 **Product Management**

**Template - Lifecycle Plan**

[See: How To- Manage Lifecycle Plan through Retirement](#)

Product Line	Product Under Consideration	Action Taken	Justification