

Product Planning

Teaching materials to accompany:

Product Design and Development
Chapter 3

Karl T. Ulrich and Steven D. Eppinger
2nd Edition, Irwin McGraw-Hill, 2000.

Product Design and Development

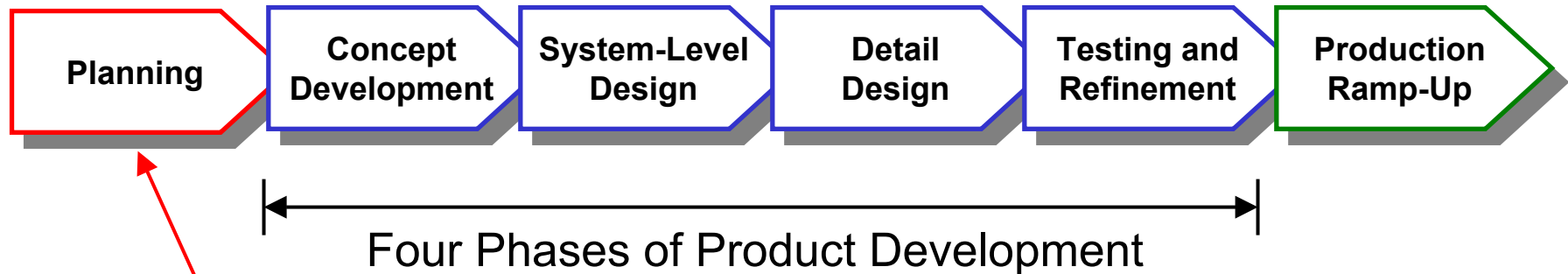
Karl T. Ulrich and Steven D. Eppinger

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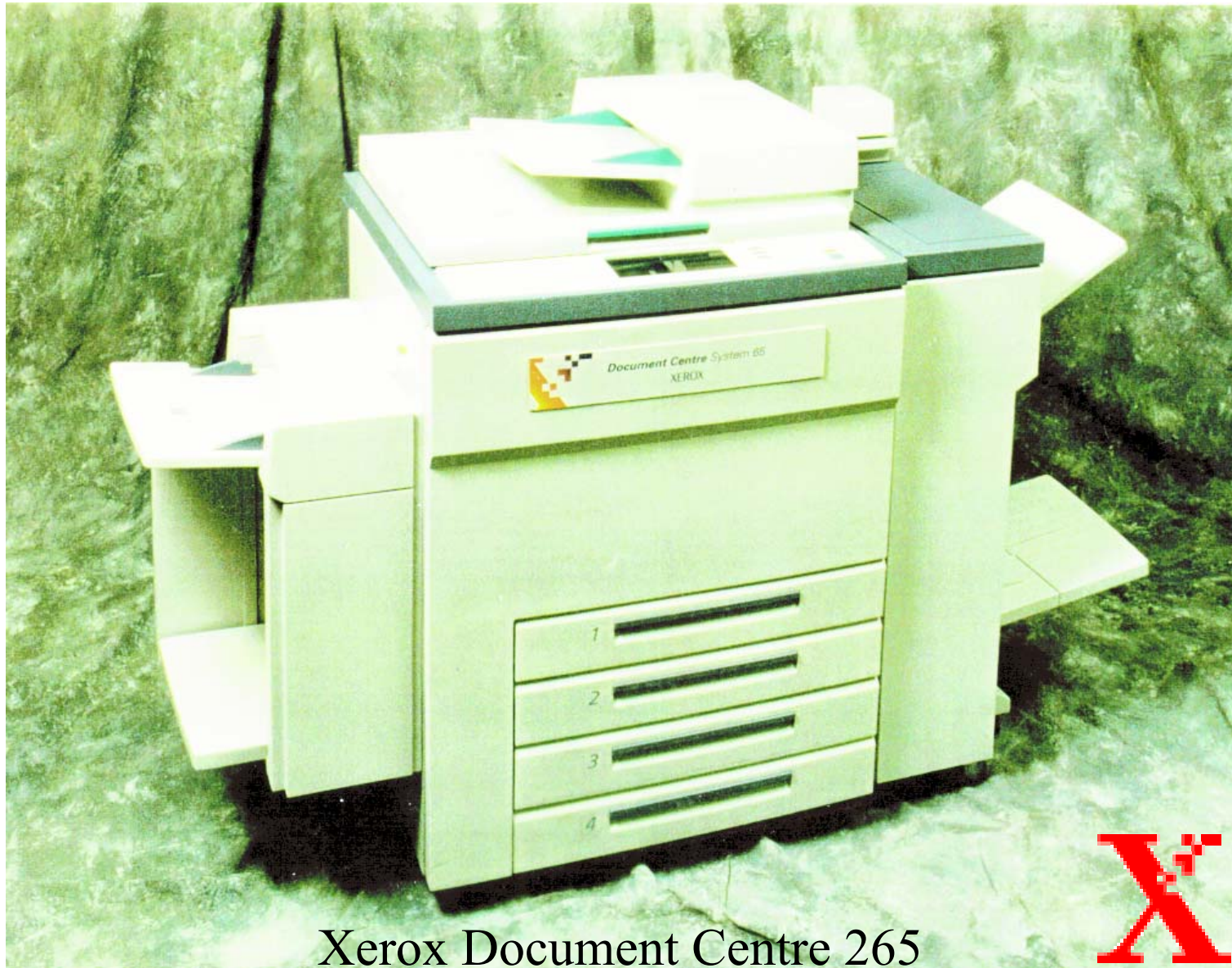
- 1. Introduction**
- 2. Development Processes and Organizations**
- 3. Product Planning**
- 4. Identifying Customer Needs**
- 5. Product Specifications**
- 6. Concept Generation**
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- 8. Concept Testing**
- 9. Product Architecture**
- 10. Industrial Design**
- 11. Design for Manufacturing**
- 12. Prototyping**
- 13. Product Development Economics**
- 14. Managing Projects**

Product Development Process



The product planning phase precedes the product development process.

Xerox Lakes Project Example



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Xerox Document Centre 265



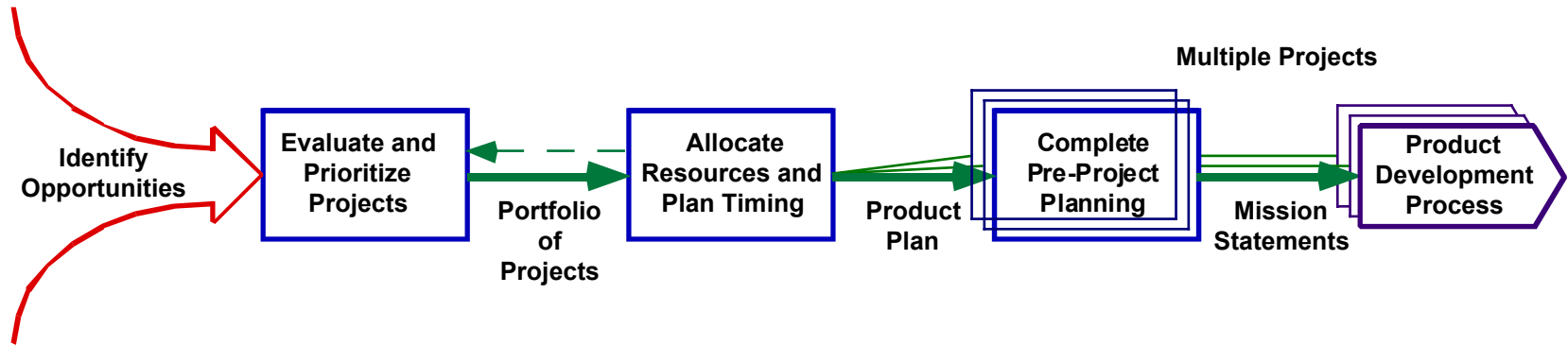


Newer models manufactured by Xerox Corporation.
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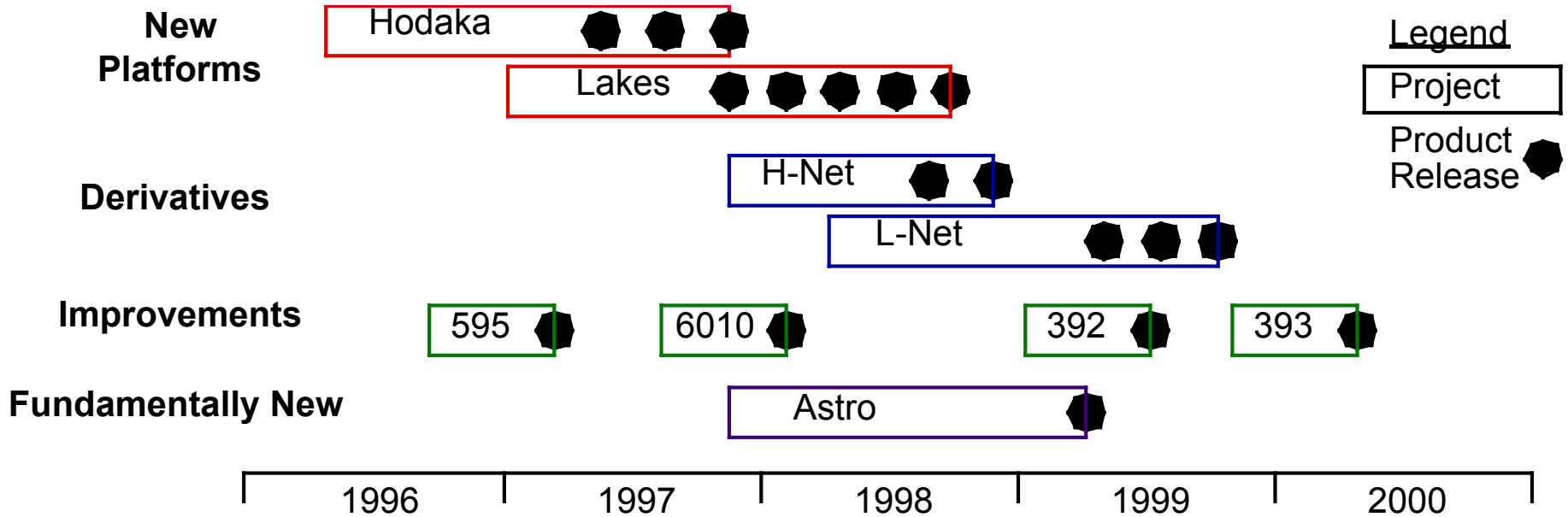


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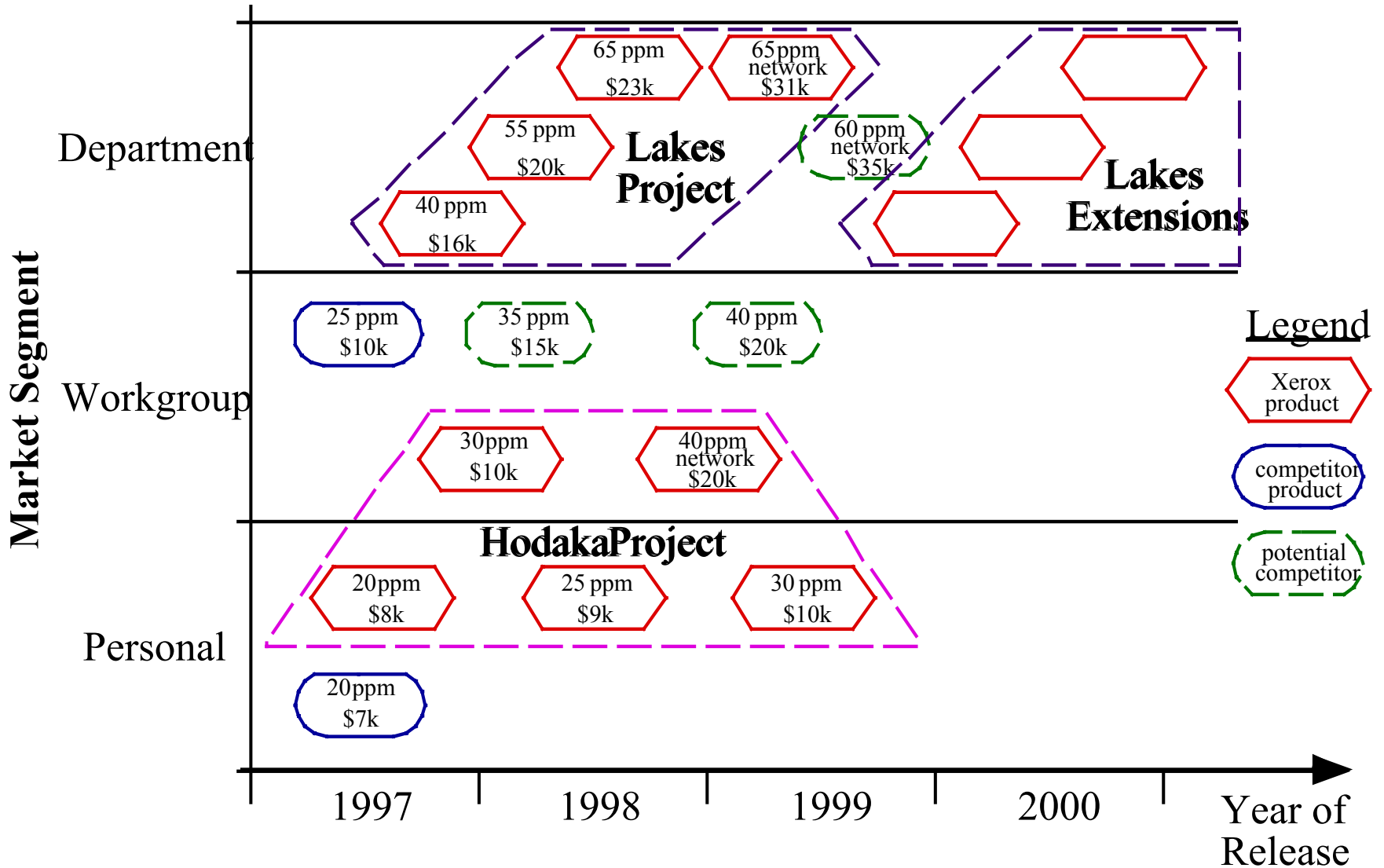
The Product Planning Process



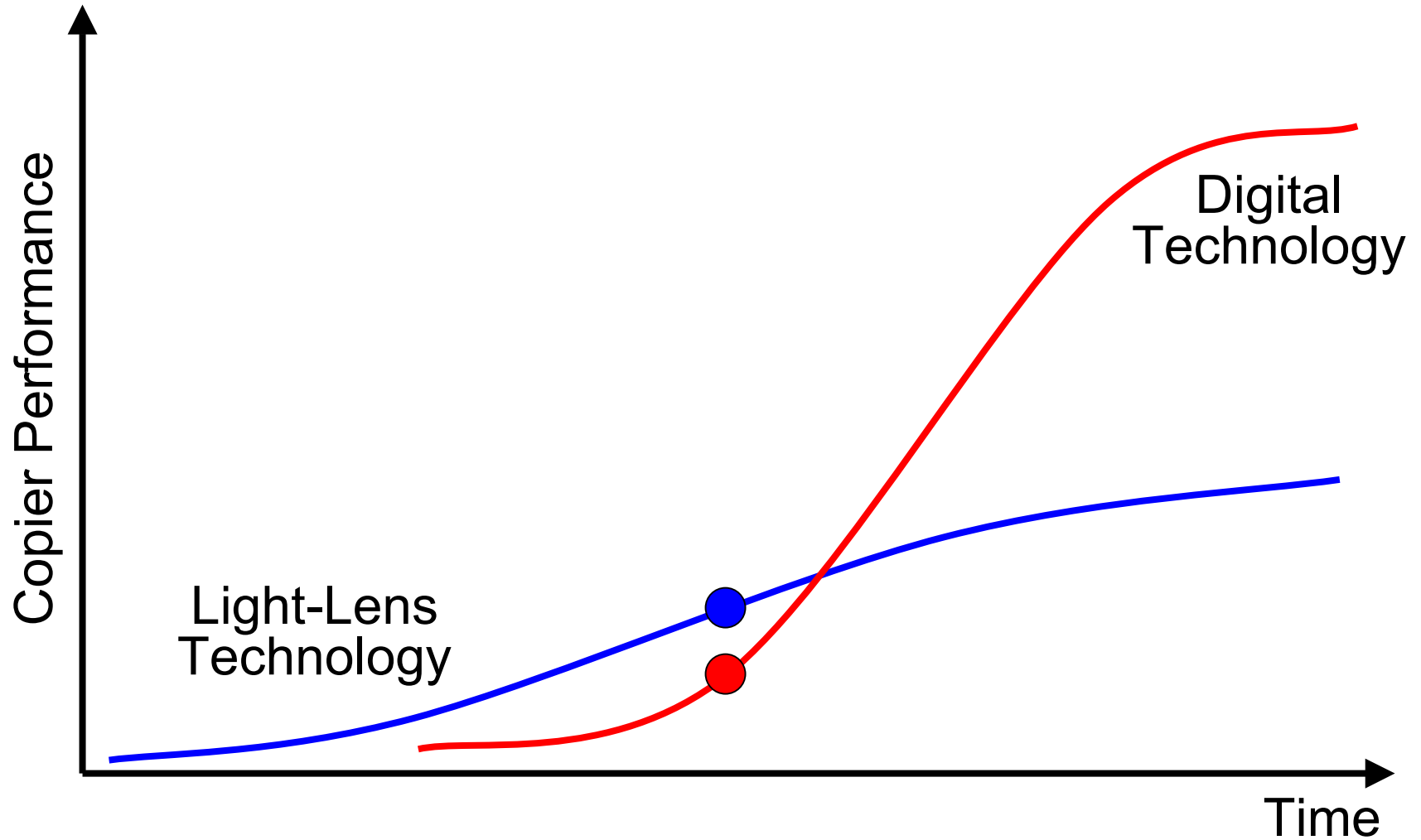
A Product Plan



Market Segment Map



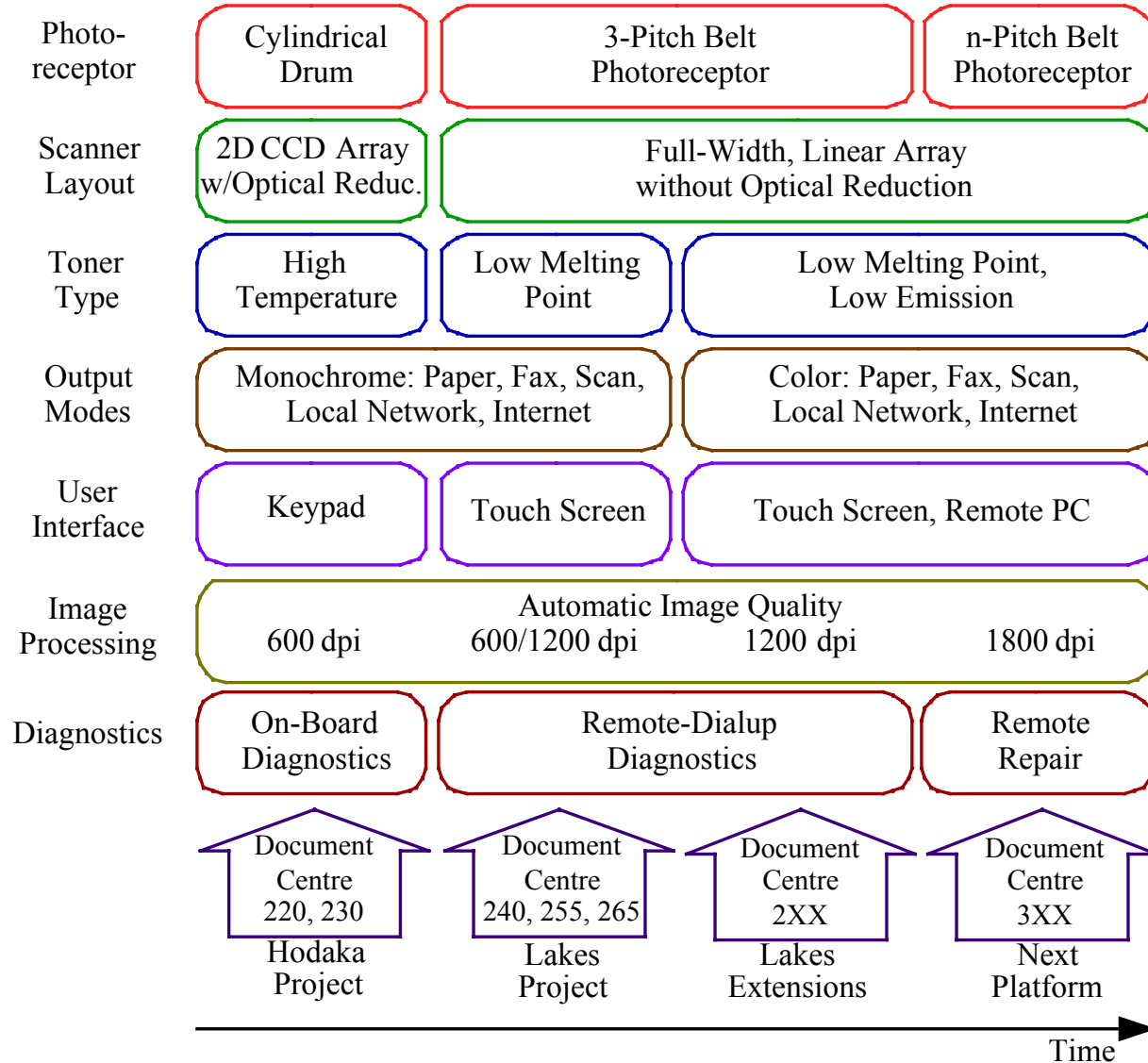
Technology S-Curves



Technology Roadmap

Functional Elements

Technologies



Platforms vs. Derivatives

Research and
Technology
Development



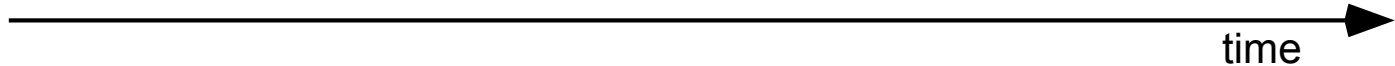
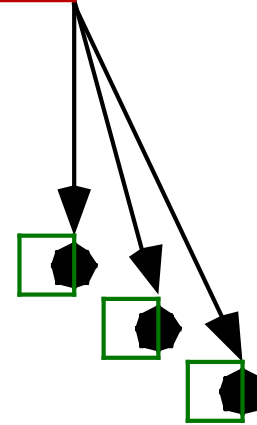
Platform
Product
Development



Legend

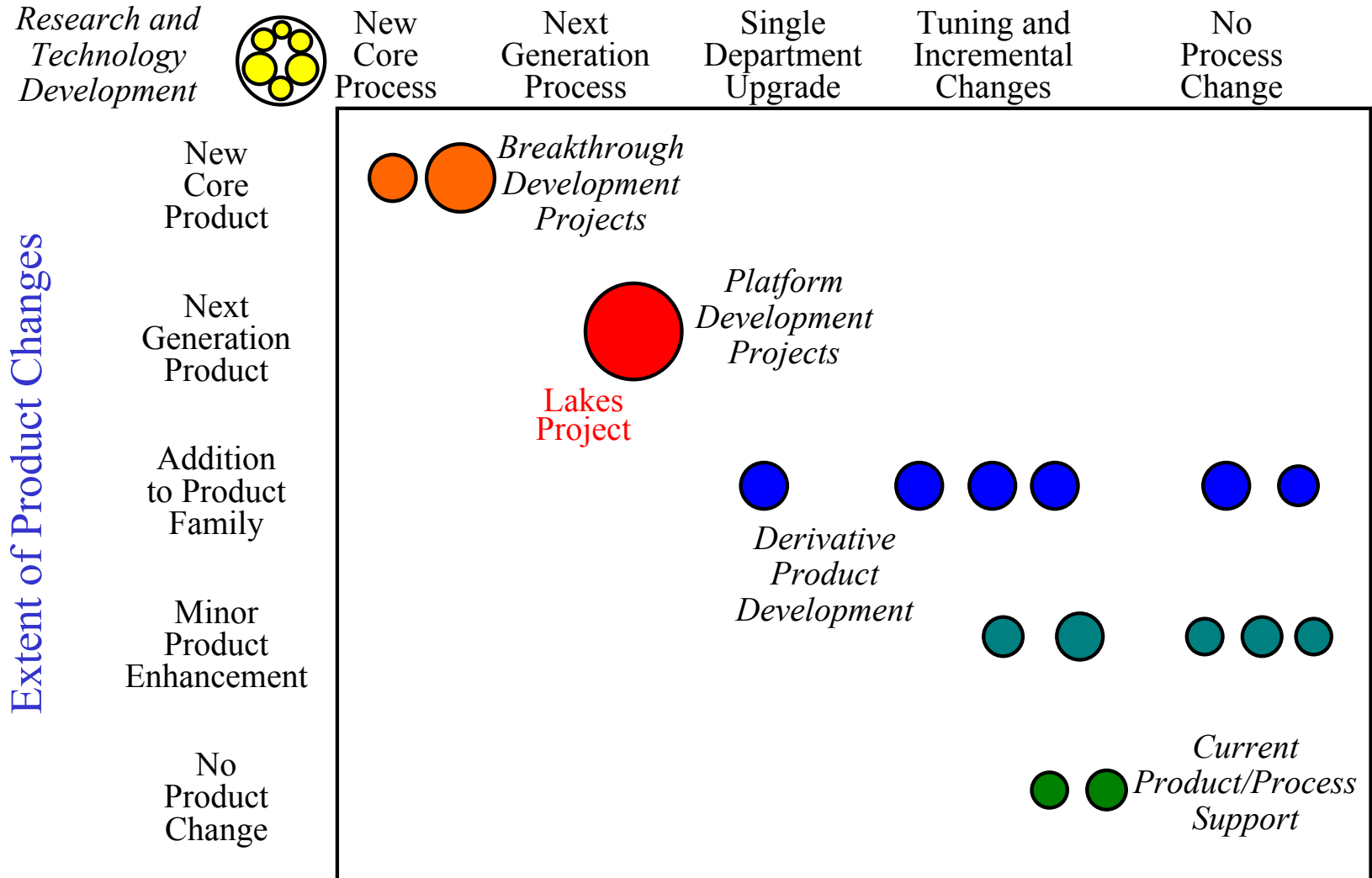


Derivative
Product
Development

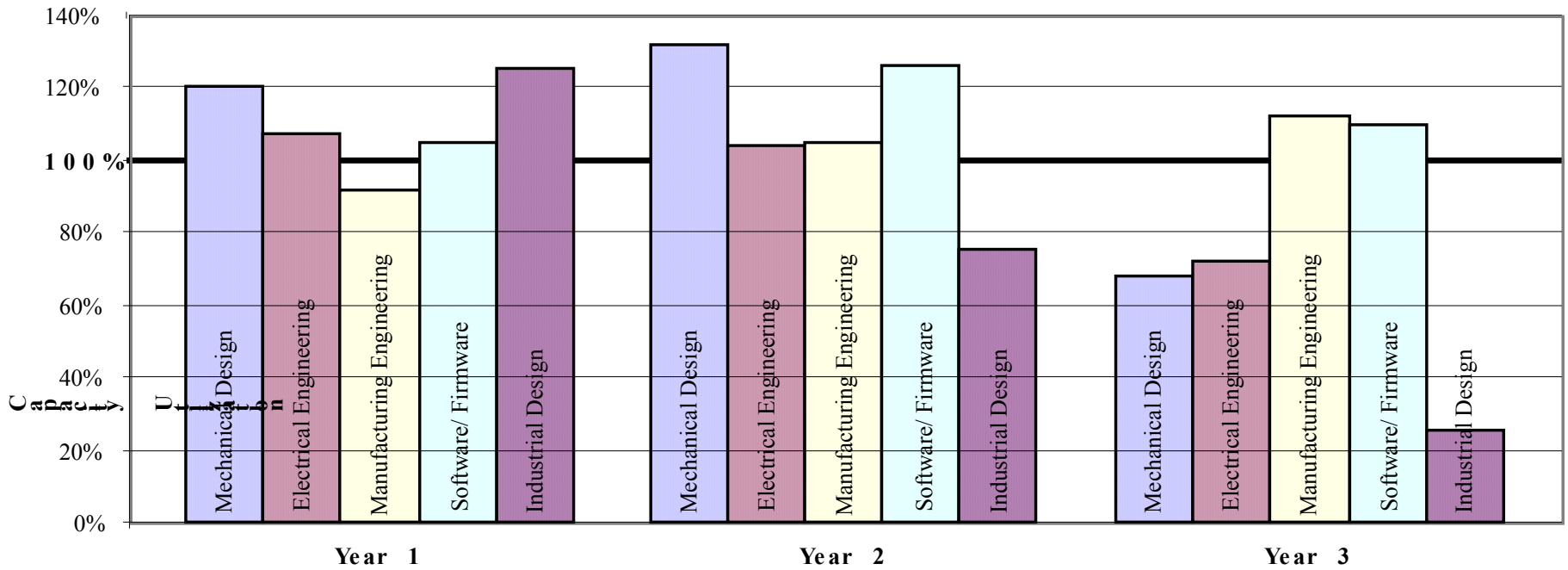


Product-Process Change Matrix

Extent of Production Process Changes



Aggregate Resource Planning



Lakes Project Mission Statement

Product Description

- Networkable, digital machine with copy, print, fax, and scan functions

Key Business Goals

- Support Xerox strategy of leadership in digital office equipment
- Serve as platform for all future B&W digital products and solutions
- Capture 50% of digital product sales in primary market
- Environmentally friendly
- First product introduction 4thQ 1997

Primary Market

- Office departments, mid-volume (40-65 ppm, above 42,000 avg. copies/mo.)

Secondary Markets

- Quick-print market
- Small 'satellite' operations

Assumptions and Constraints

- New product platform
- Digital imaging technology
- Compatible with CentreWare software
- Input devices manufactured in Canada
- Output devices manufactured in Brazil
- Image processing engine manufactured in both USA and Europe

Stakeholders

- Purchasers and Users
- Manufacturing Operations
- Service Operations
- Distributors and Resellers