

Product Planning

4013.315 Architectural Engineering System Design

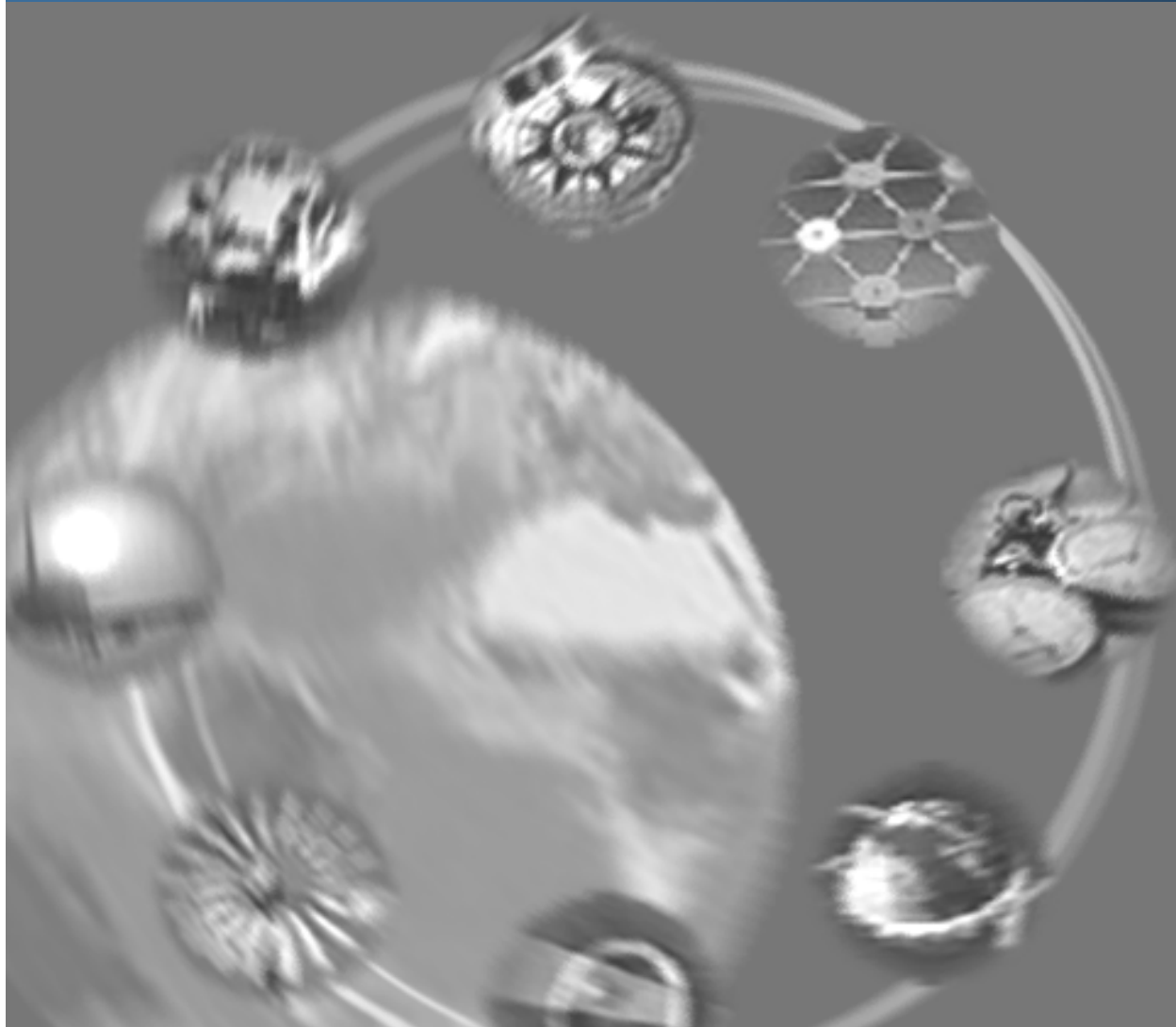
April 1st, 2009

Moonseo Park

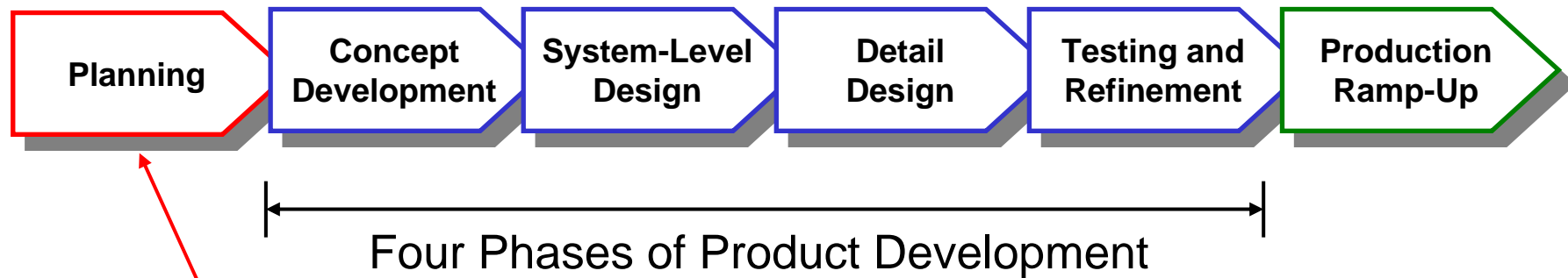
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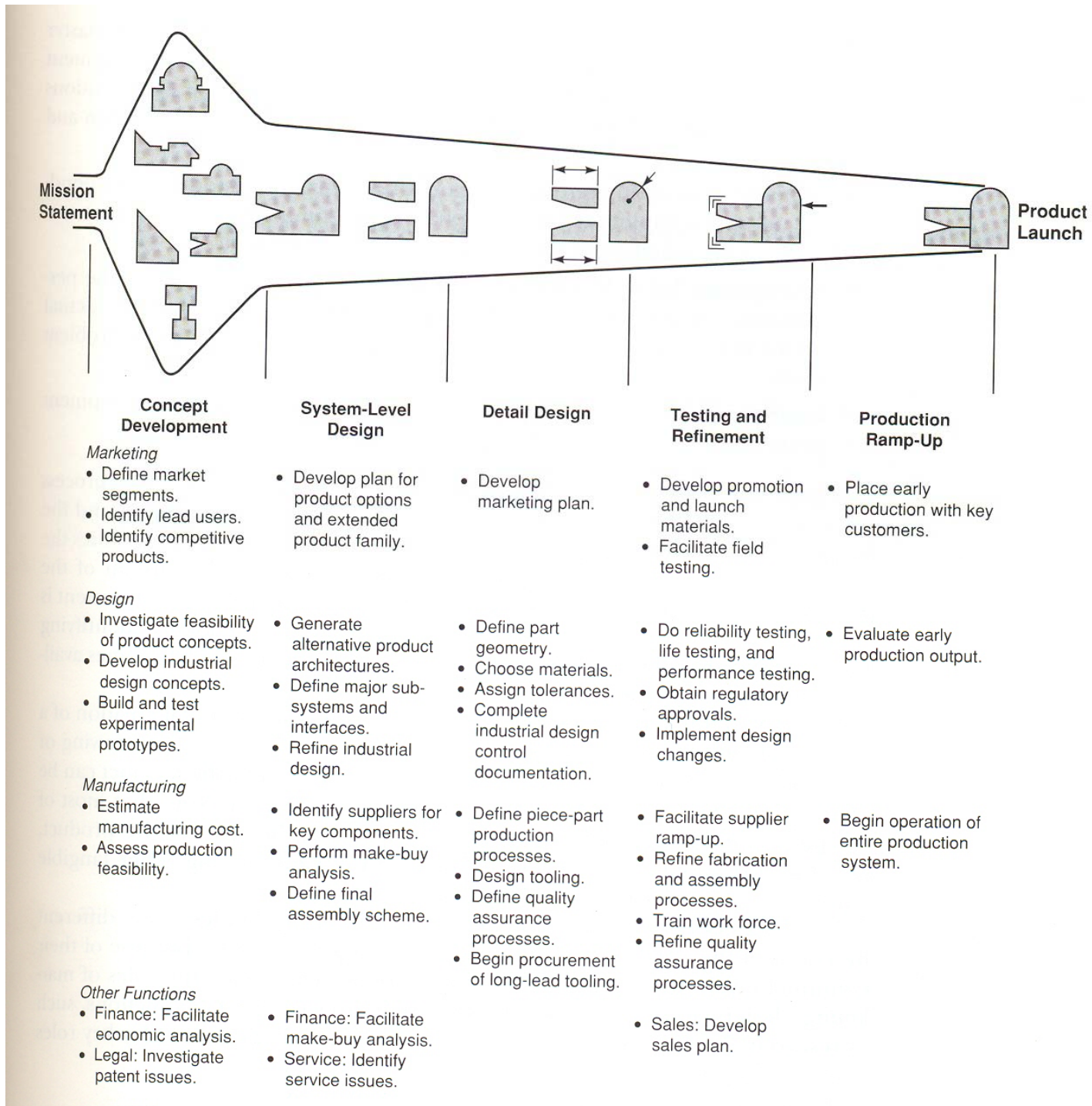


Product Development Process

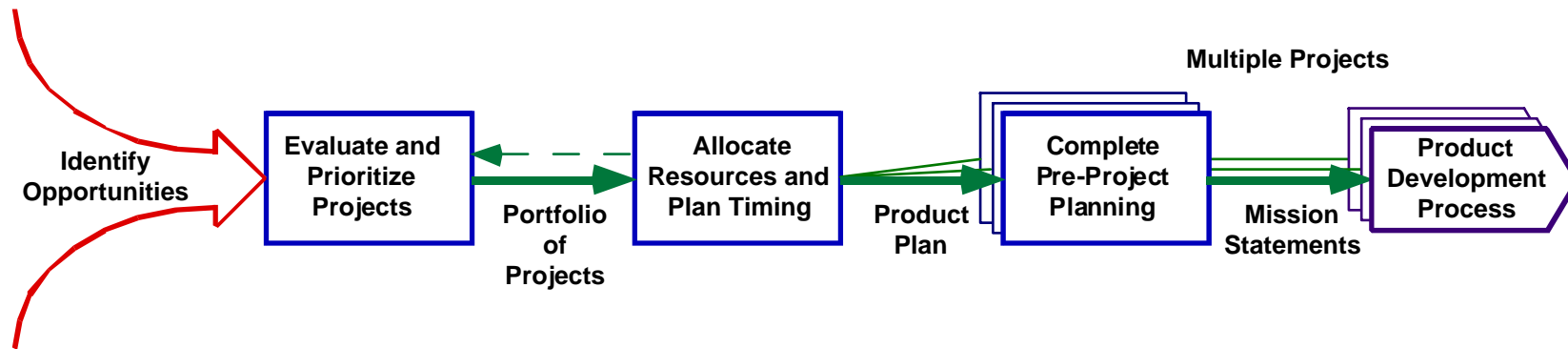


The product planning phase precedes the product development process.

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



The Product Planning Process



- Product Design and Development
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Session Outline

- **Product development opportunities.**
- **Market competition.**
- **Technology.**
- **Portfolio planning.**
- **Mission statements.**

Product development opportunities

- **Marketing/Sales**
- **Research/Technology Development**
- **PD Teams**
- **Manufacturing**
- **Customers**
- **Suppliers**
- **Other business groups**

수요자 피드백의 예

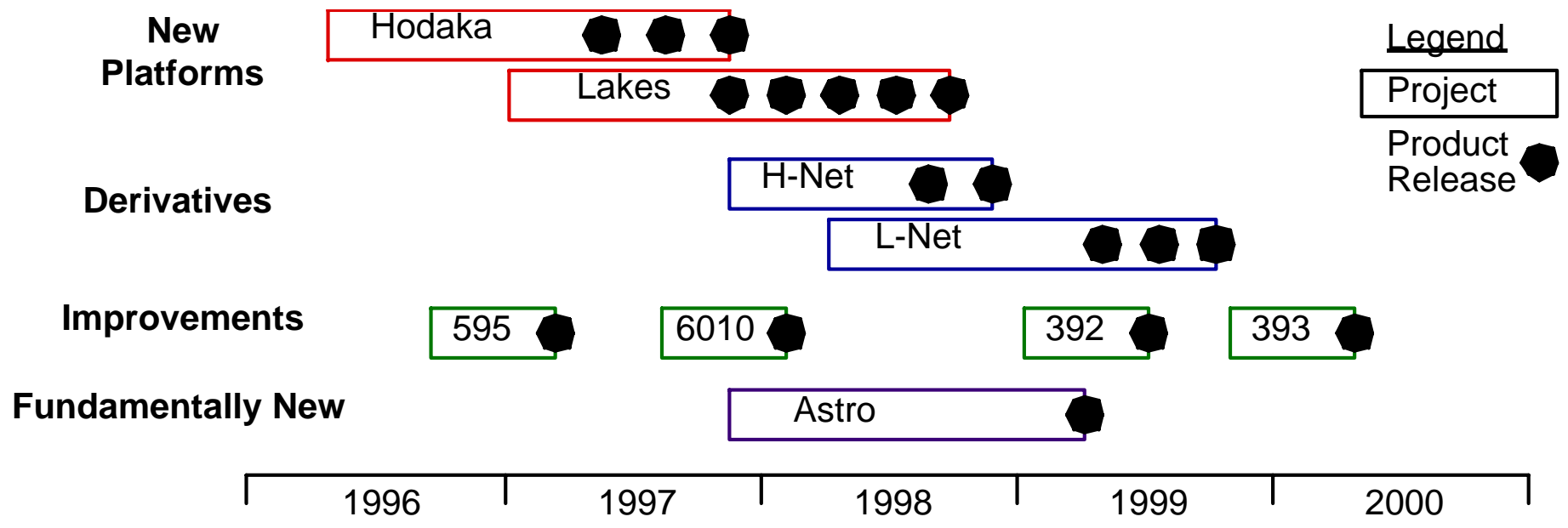


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Market competition

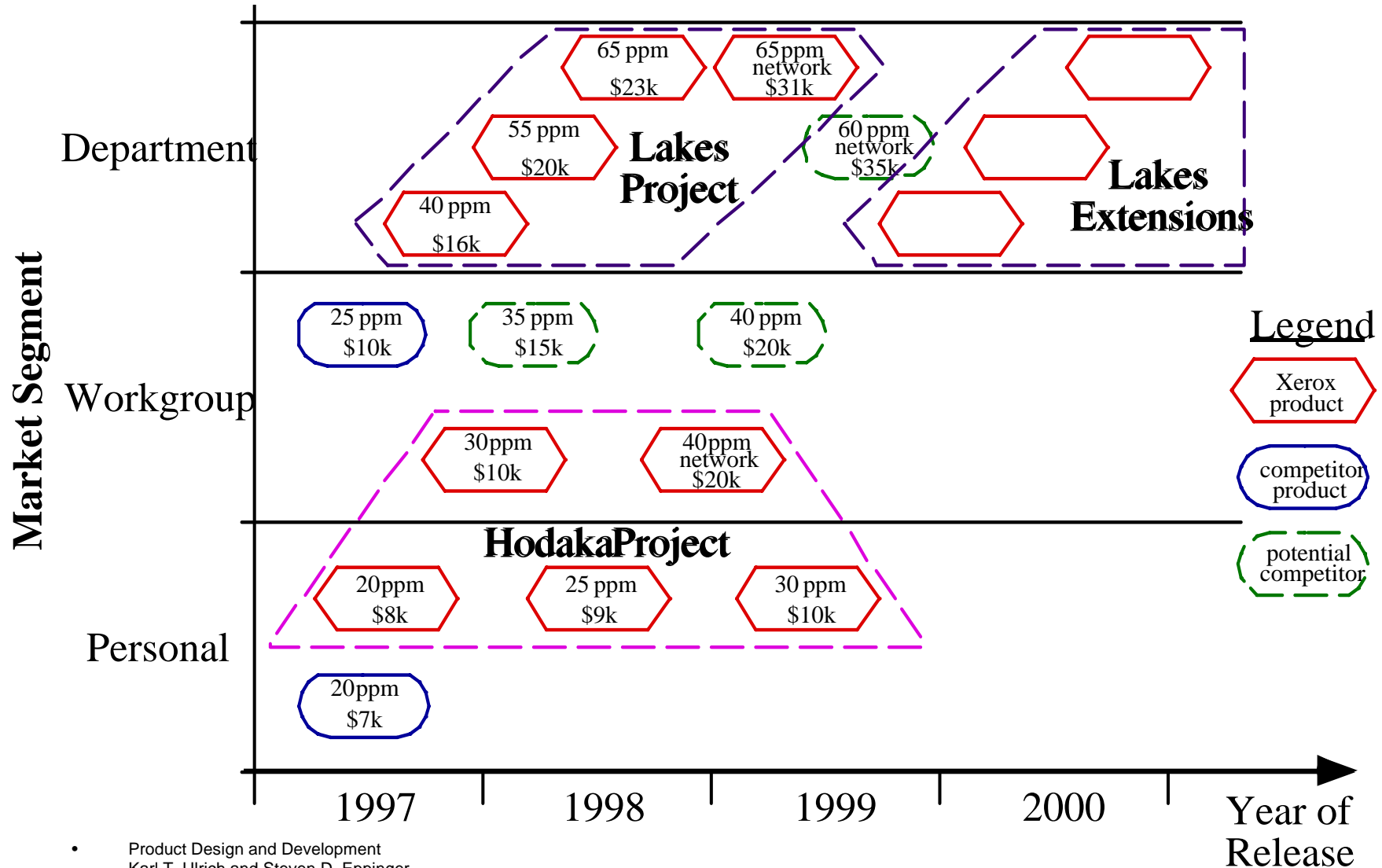
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A Product Plan



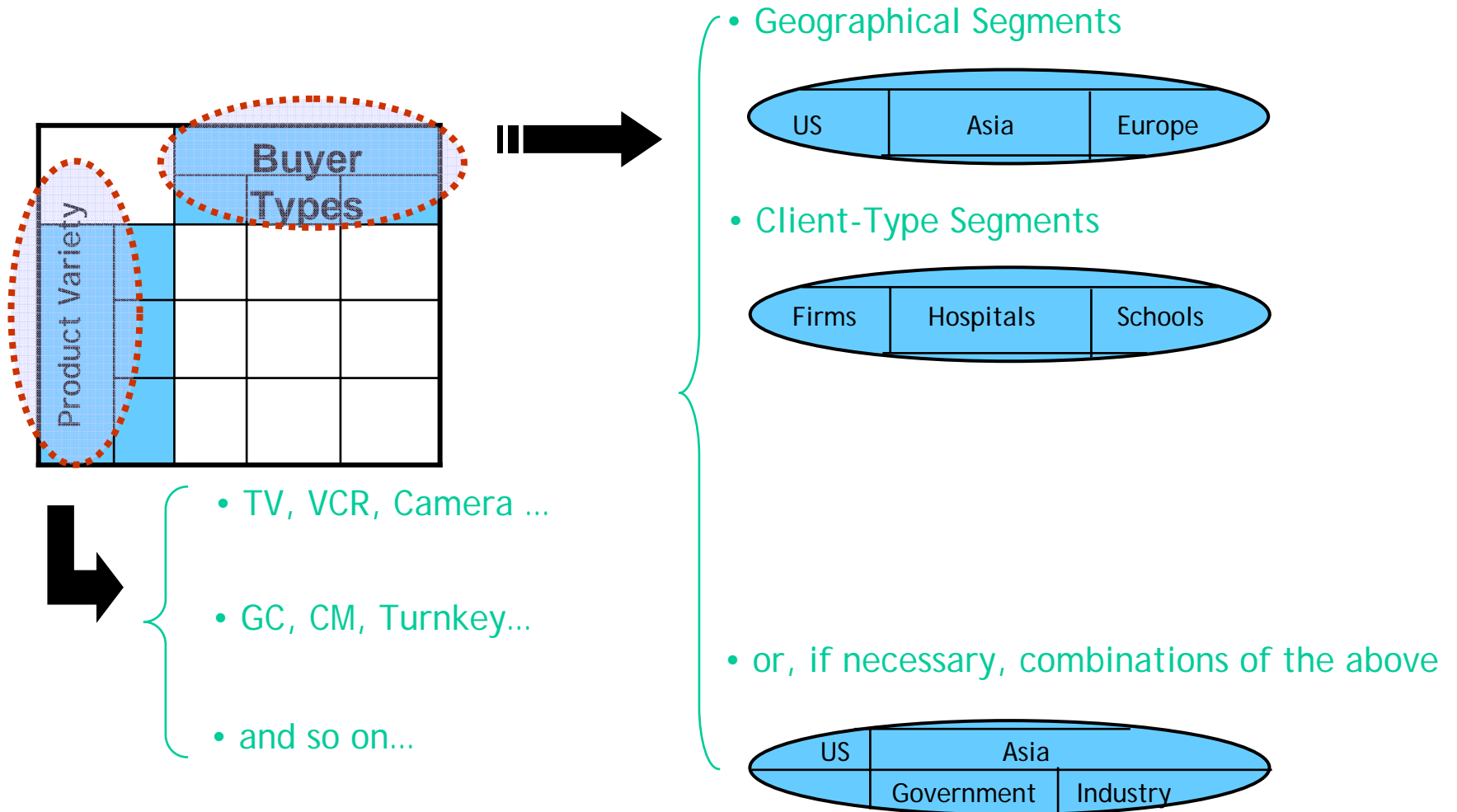
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Market Segment Map

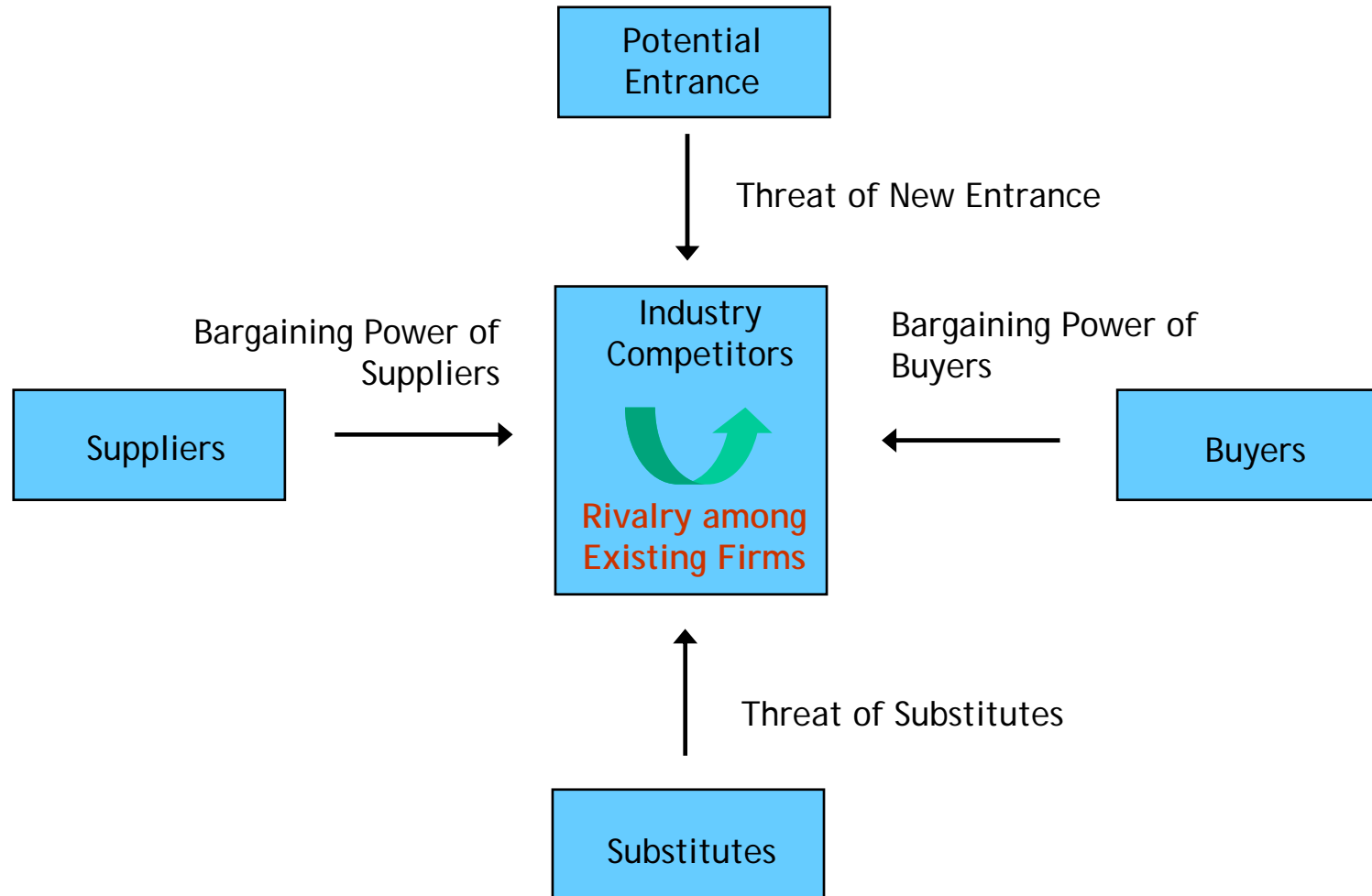


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Segmentation Matrix for Construction Firms



Michael Porter's Five Forces

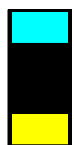


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Segmentation Matrix for Fluor Daniel

Description		Buyers																								
		N. America					International																			
							Asia					Europe					S. America					Africa				
		G	P	I	E	T	G	P	I	E	T	G	P	I	E	T	G	P	I	E	T	G	P	I	E	T
Product Variety	GC	FP																								
		RB																								
	CM	FF																								
		CP																								
	DB	FP																								
		RB																								
	TK	FP																								
		RB																								
	BOT																									

* Note



: Fluor Daniel
 : ABB
 : Bechtel
 : Kiewit

G: general building
 P: process
 I: industrial
 E: environmental
 T: telecommunicatic

GC: general contract
 CM: construction manager
 DB: design-build
 TK: turnkey
 BOT: build-operate-transfer

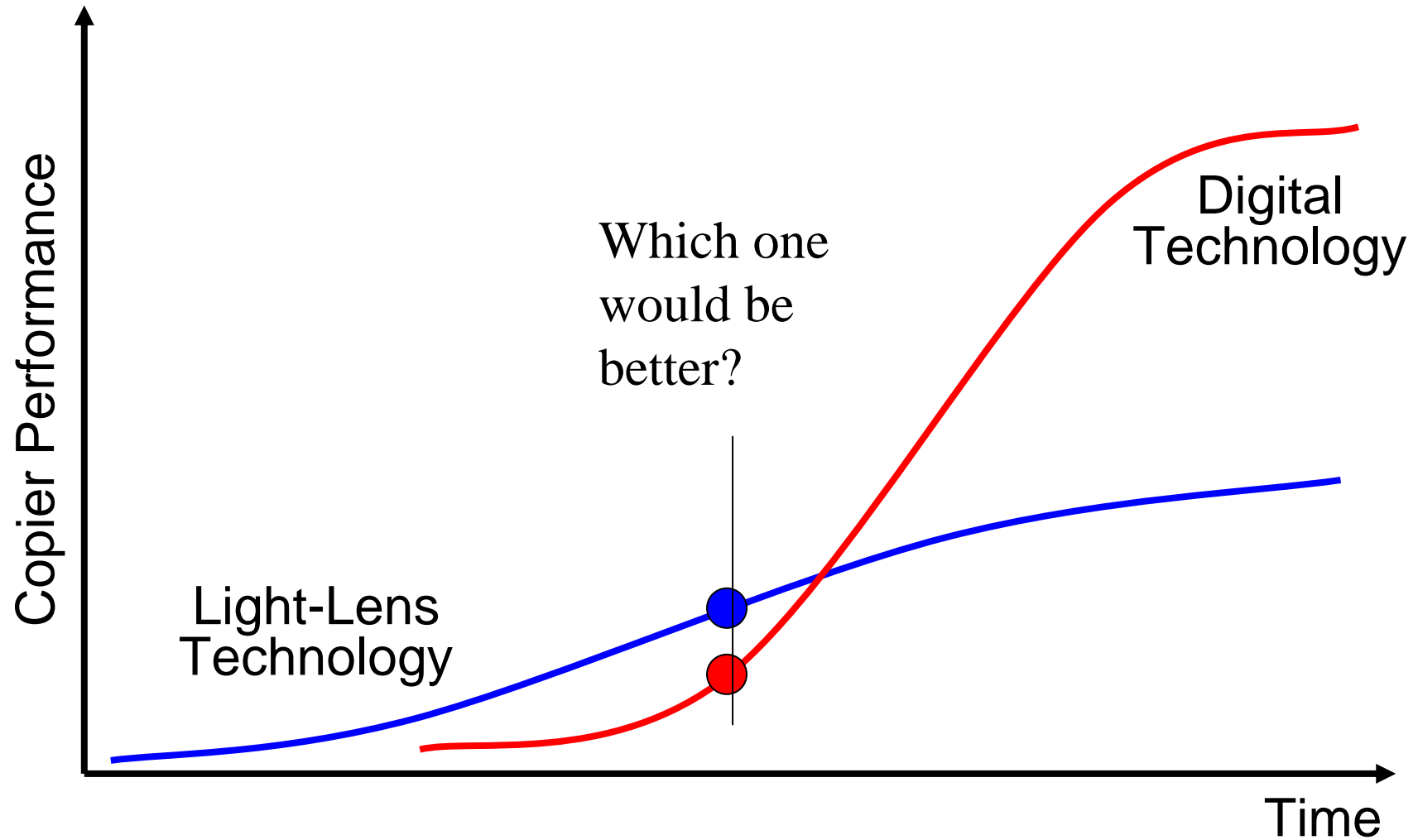
FP: fixed price
 RP: reimbursable
 FF: fixed fee
 CP: cost-plus

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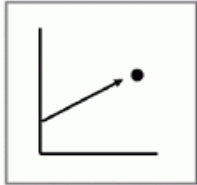
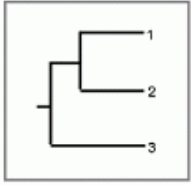
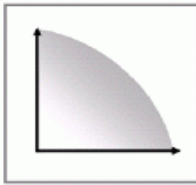
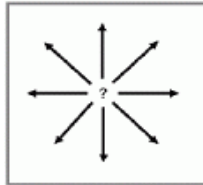
Technology

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Technology S-Curves



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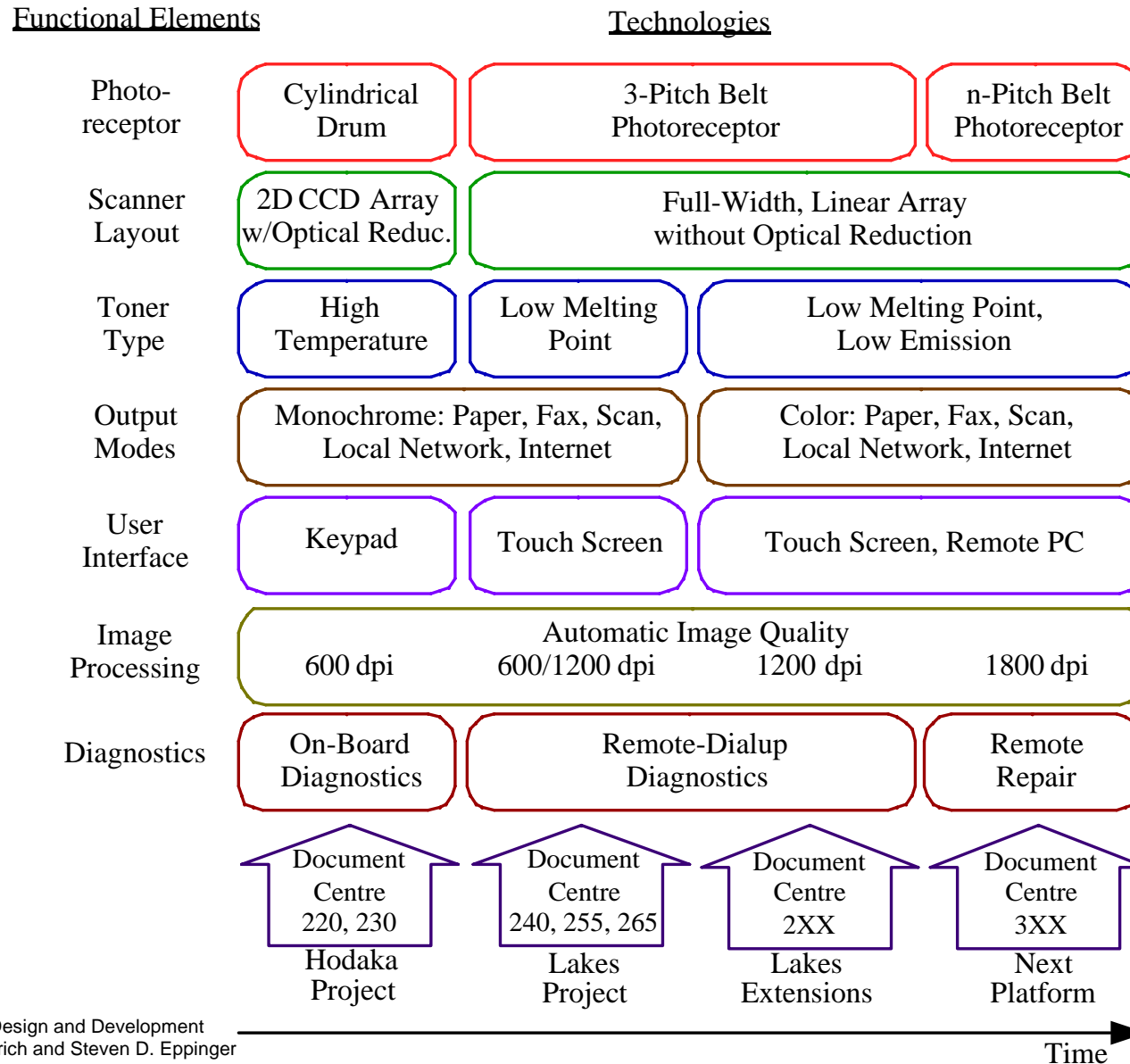
구분	수준 1	수준 2	수준 3	수준 4
불확실성 수준	충분히 예측 가능 (a clear future) 	선택 대안 존재 (alternative future) 	대안의 영역 존재 (a range of future) 	완전히 모호함 (true ambiguity) 
알 수 있는 것	전략을 결정하기에 충분히 정확한 예측	미래를 규정하는 서로 다른 몇 가지 시나리오	가능한 결과 범위, 하지만 자연스럽게 도출되는 시나리오는 없음	미래를 예측하는 근거가 없음
분석 도구	전통적인 분석 도구들	의사결정분석도구 옵션 평가모형 게임이론	잠재수요 연구 기술예측, TRM 시나리오 계획	유추와 형태 인식 비선형 동적 모형

Technology Roadmap

- 기술요소들 간의 시간적 구조적 관계를 시각적으로 표현
- 기술개발목표 달성을 위한 대안평가 및 핵심기술 확보를 위한 전략적 선택을 도와주는 도구
- 일반적으로 5~10년 또는 그 이상의 중장기 기술 개발을 위한 상위 전략 (High Level Strategy)
- 기술 선정에 관한 합의를 이끌어 내는 방법론인 동시에 기술개발계획을 조정하기 위해 사용되는 틀

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Technology Roadmap

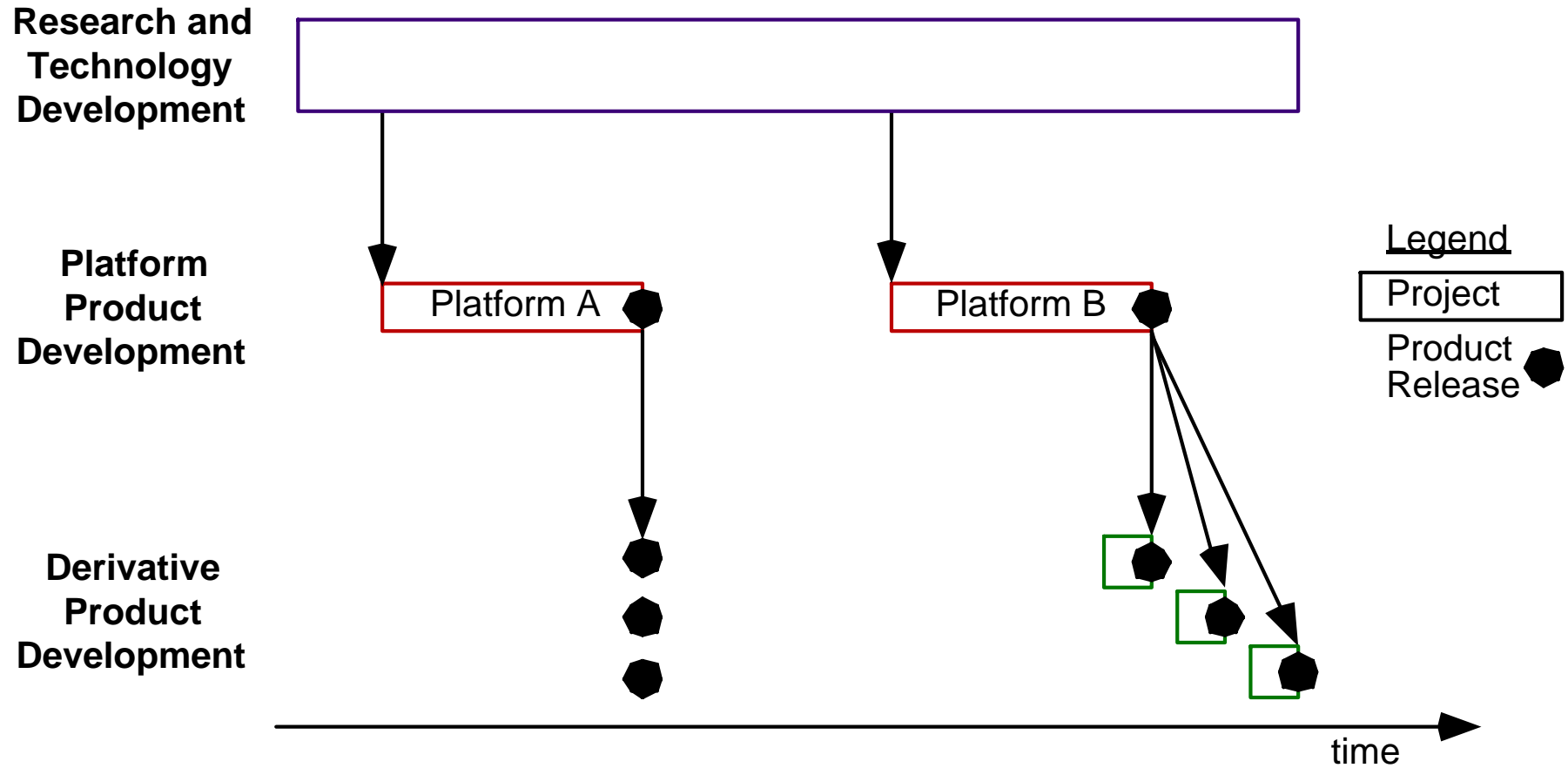


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Portfolio Planning

- The difference between a product and a platform?
- When is a platform appropriate?
- When is a new platform necessary?

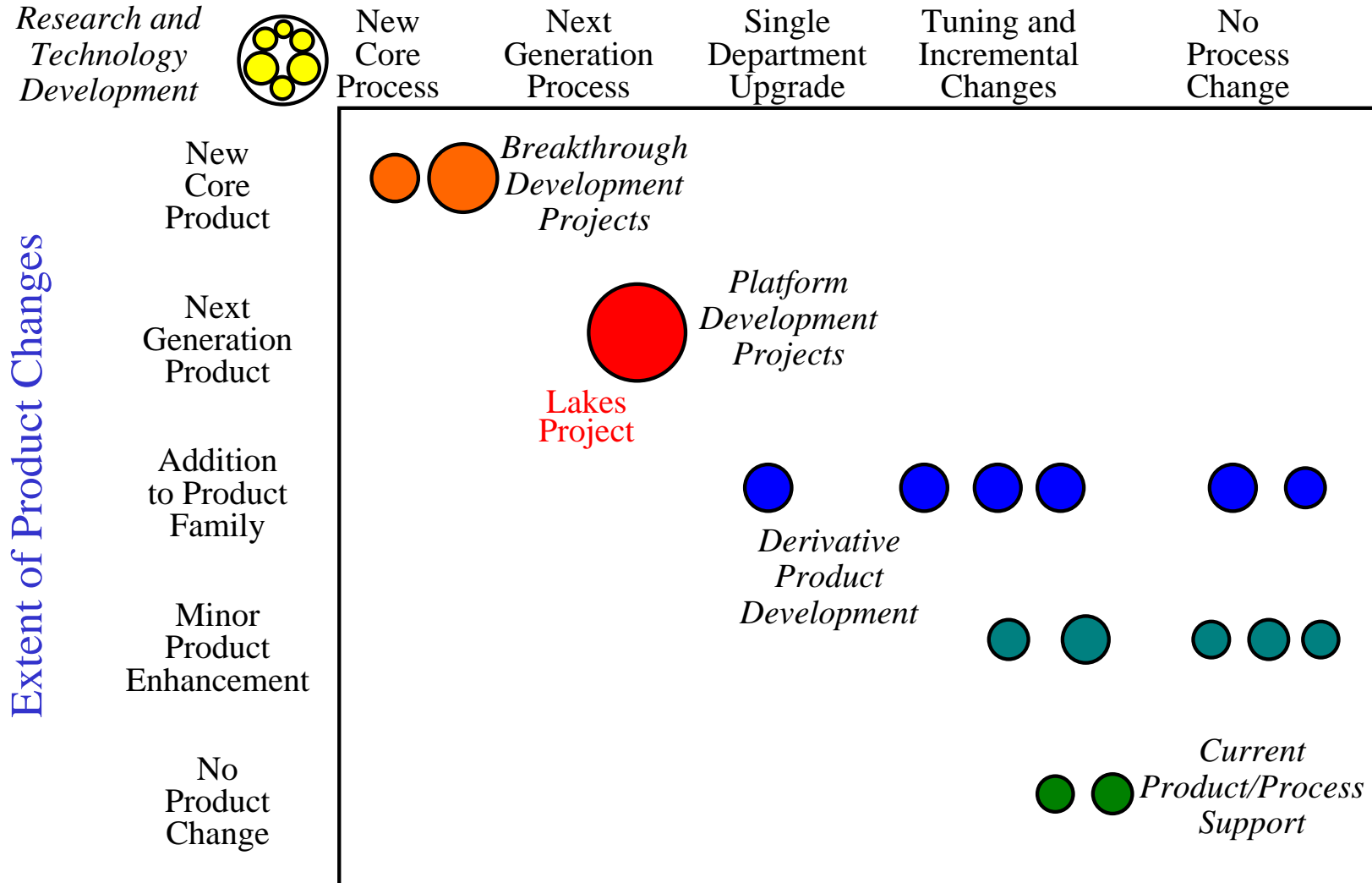
Platforms vs. Derivatives



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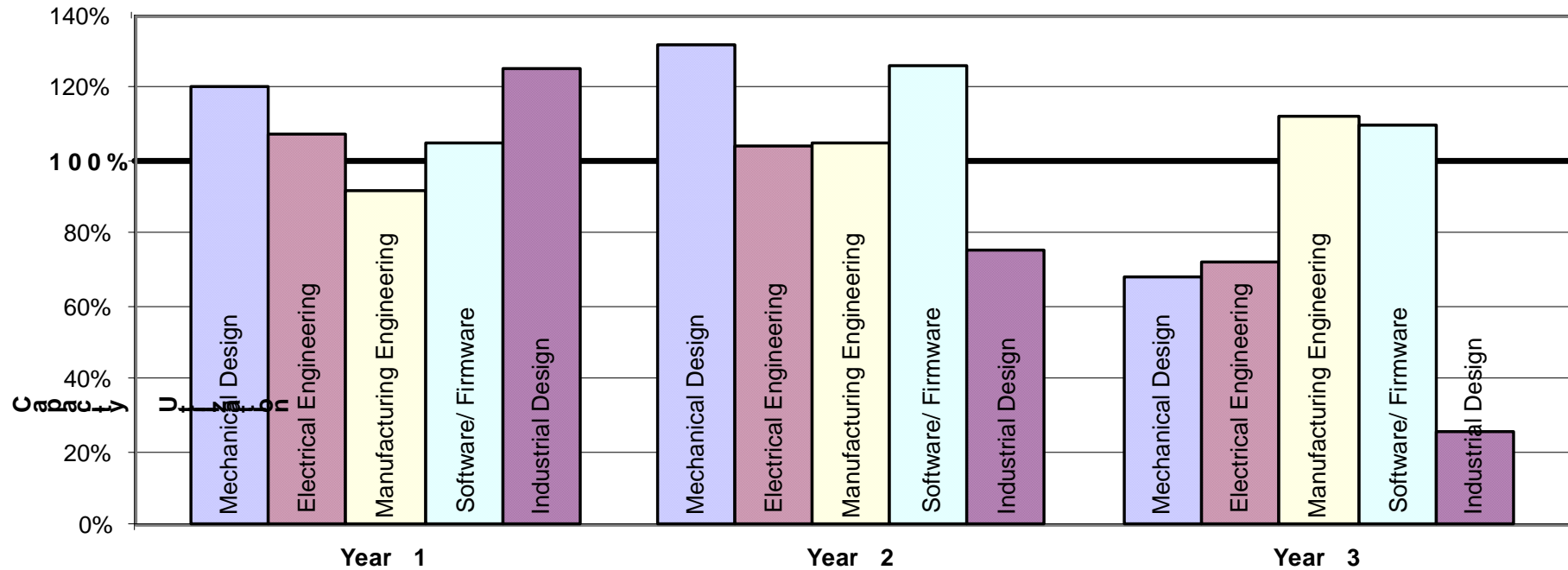
Product-Process Change Matrix

Extent of Production Process Changes



- Product Design and Development
Karl T. Ulrich and Steven D. Eppinger
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Aggregate Resource Planning



- Product Design and Development
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Mission Statement

- the essential elements of the mission statement?
- the role of assumptions and constraints?

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

CD Rack

