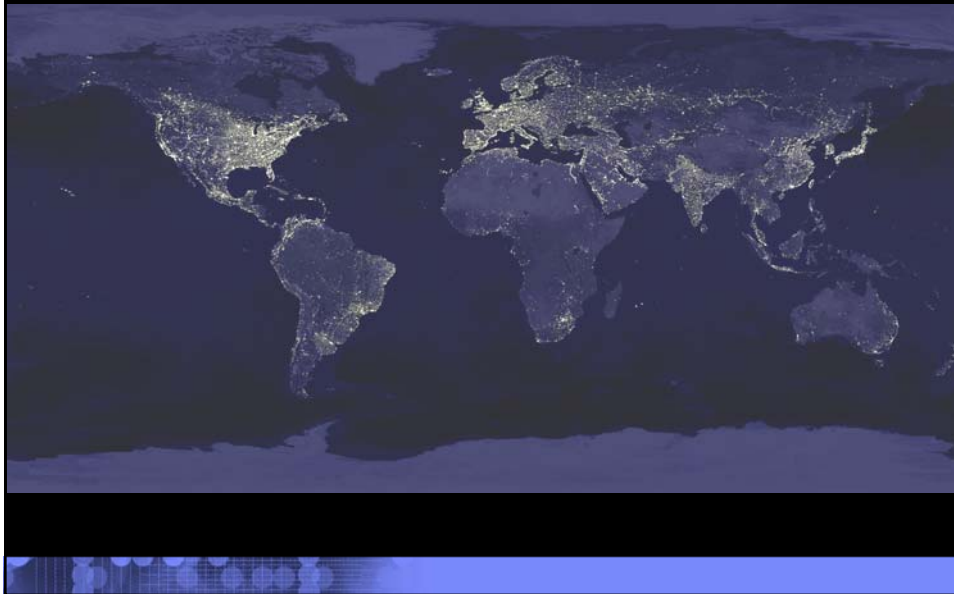


# Innovation Diffusion Theory: How To Make Innovations Profitable

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Danish Award Ceremony: Copenhagen  
22 September 2005

## Technology Diffusion Worldwide



## Peter F. Drucker



## Innovation

“Because its purpose is to create a customer, the business enterprise has two – and only these two – basic functions: marketing and innovation.”

*Peter Drucker, People & Performance,  
Harper & Row, 1977*

## Everett M. Rogers



## Diffusion

- Innovation is of little value unless it diffuses
- Curiously, diffusion theory's dominant paradigm emanated in rural sociology
- Everett M. Rogers' Diffusion of Innovations was published in 1962 and is one of the most cited books in the social sciences. Now in its 5<sup>th</sup> edition.

## Twin Strategies for Profitability

- Relentless Innovation
- Rapid Penetration

## Relentless Innovation

### Competitive Rationale:

“I think Sony’s mission is to make our own products obsolete. Otherwise, somebody else will do it.”

Kunitake Ando, President of Sony, [Financial Times](#), February 10, 2003

### Consumer Rationale:

- > Benefit escalation, e.g., PDAs
- > Benefit evolution, e.g., digital cameras

## Market Driving

- The challenge is to anticipate customer needs
  - Market Sensing
- Marketing research too often assumes that customer needs are established
- New directions must generally be inferred
  - iPod
  - Rolls Royce jet engines

## Rolls Royce Aero Engines Market Vision

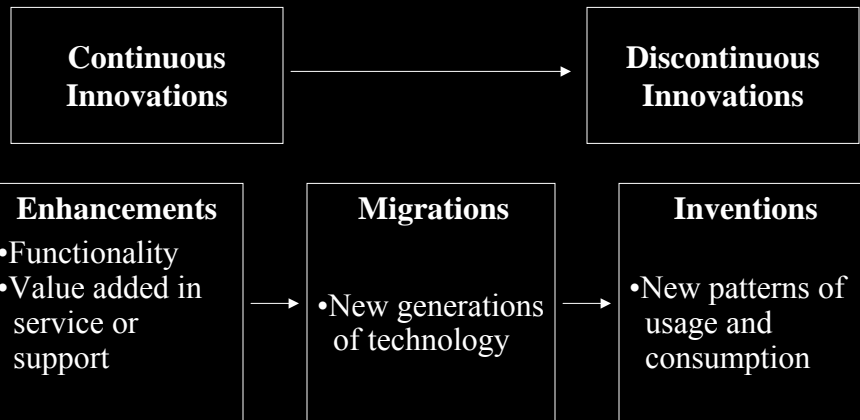
- “Power by the hour”
- Real-time ground to air monitoring
- Rolls Royce assumes the responsibility. Airlines don’t really want to own and maintain engines.

## Market Driving

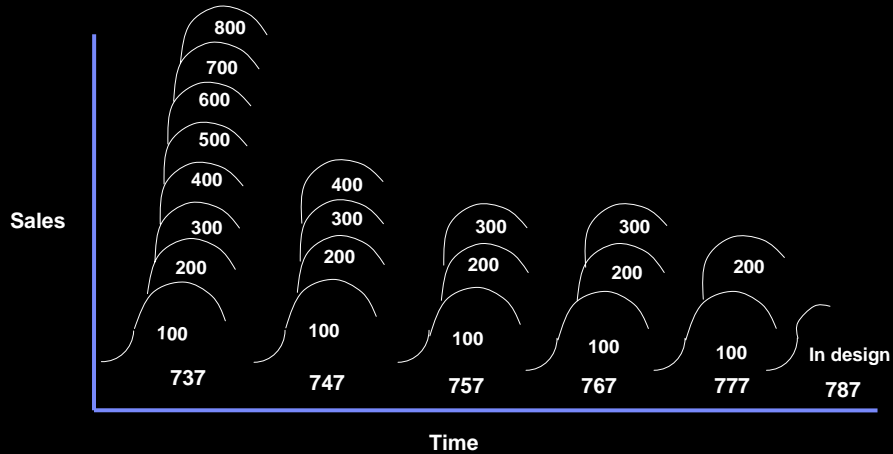
“My success in scoring goals is to anticipate where the ball is going – not to chase it.”

Pelé

## The Innovation Continuum



## Boeing's Current Portfolio of Enhancements & Migrations

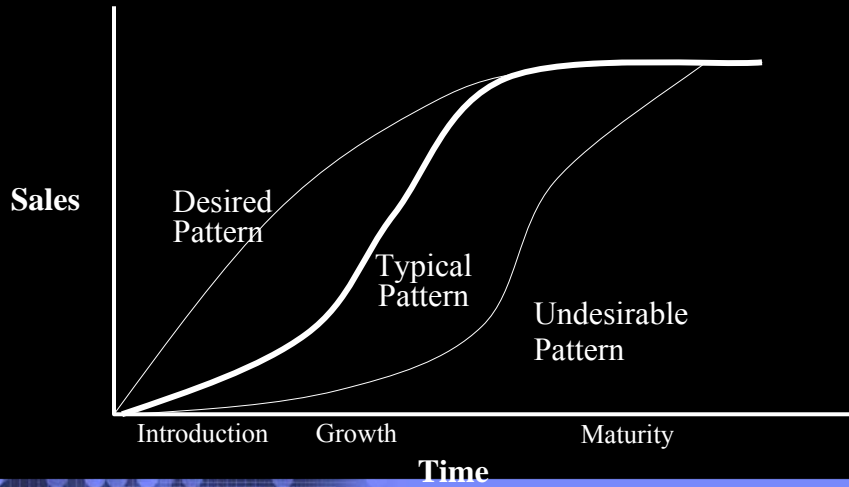


## Rapid Market Penetration

- Capture Brand Loyalty and Reputation Effects
- Set the Dominant Standard
- Achieve Scale and Experience Effects
- **Capture Sales and Profits Before Competitors**

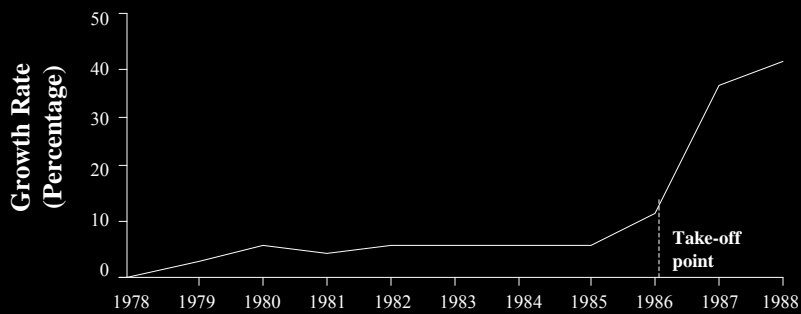
Rapid Penetration

# Market Penetration Scenarios



Rapid Penetration

# Fax Adoption in the U.S.A.

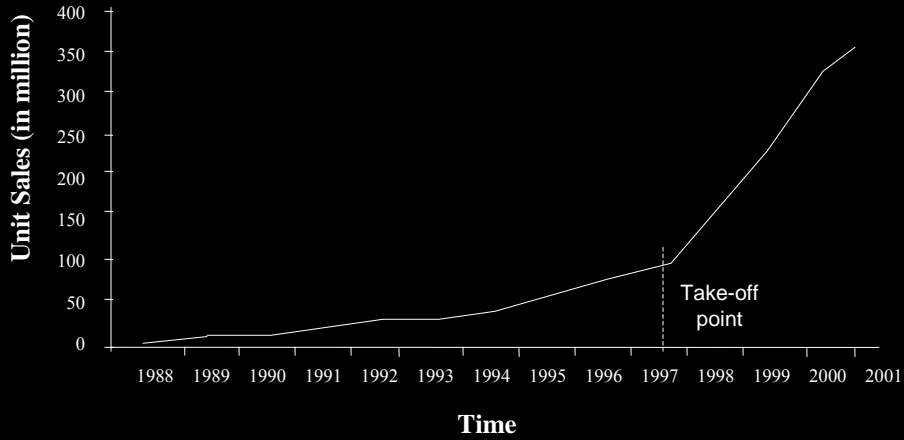


Source: Economides and Himmelberg 1995



Rapid Penetration

# Mobile Phone Adoption in Seven European Countries

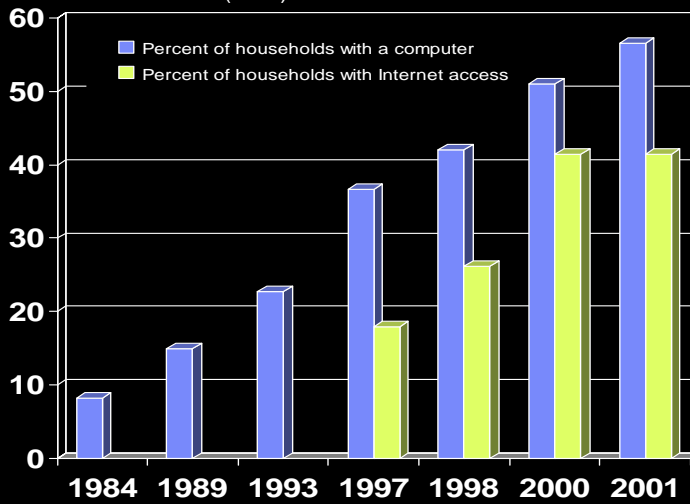


Source: Quantumweb

Rapid Penetration

# Computer and Internet Diffusion

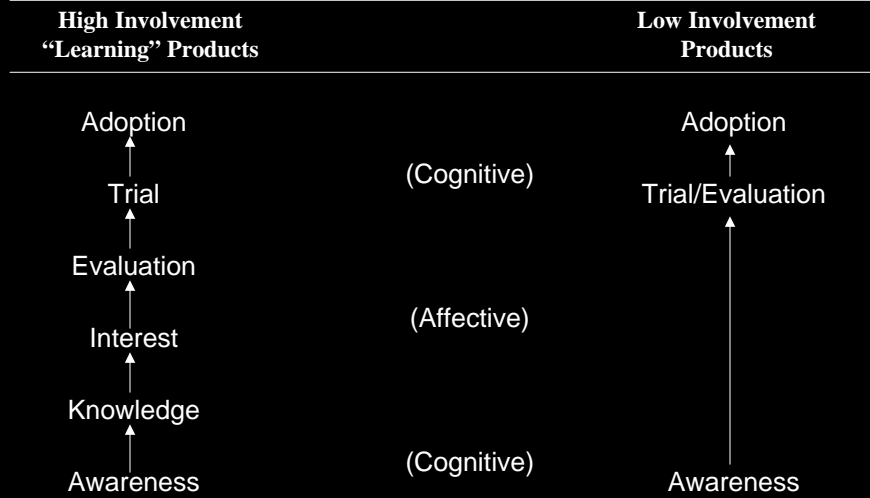
Computers and Internet Access  
in the Home: 1984 to 2001 (USA)



Source: U.S. Census Bureau, Current Population Survey.



## Manage The Purchase Decision Process



## High vs. Low Involvement Products

Issues	High Involvement View	Low Involvement View
Decision Process	Consumers pass through a learning hierarchy	Awareness and trial may be the only steps necessary before purchase
Role of the Consumer	Active seekers and processors of information	Passive recipients of information and limited processing
Consumer Defenses	Cognitive resistance to discrepant information	Lack of cognitive resistance
Personal Influence	Other people are used for information and social imitation	Lack of personal information and social imitation
Marketing Program	Educate	Inform

## What Have We Learned?

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- Anticipate the future
  - *infer* consumer needs
- Drive the market
  - create consumers
- Provide the applications
  - most new product failures are not due to technology problems
- Manage the innovation continuum
  - enhancements/migrations/invention
- Accelerate diffusion
  - get a fast start
- Manage the purchase decision process
  - High vs. low involvement