



Forces for Change in the Agricultural Industries: How Does It Affect Dairy?

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- 1. Understand strategic surprises**
- 2. Enhance strategic decision making**

Three Questions

1. Will agriculture become more vertically integrated?
2. Why is it so difficult to anticipate industry redefinition?
3. When is the best time to invest in strategically important systems?

Agenda

- ✓ • **Industry redefinition and knowledge creation**

Industry Redefinition Case Studies

Stories of Competitive Dynamics

- **American Hospital Supply**
- **American Airlines and Sabre**
- **Frito Lay**

****** Broiler industry ******

What is Industry Redefinition ?

Redefinition: When profound change occurs in the rules of competition

- Between suppliers and customers
- With consumers
- Among competitors

Knowledge Creation

Stories of Competitive Dynamics

1. American Airlines and Sabre
2. American Hospital Supply
3. Frito Lay

**** Broiler industry ****

Common Factors

Hallucination

Aggressively run their own
operating supply chain
effectiveness

Agenda

use of !

- Industry redefinition and knowledge creation
- ✓ • **How information technology redefines industries**

Information Technology And Strategic Change

**Jeffrey Sampler: How information
technology redefines industries.**

... Look at individual transactions

(1) Separability

(2) Aggregation potential

Transaction Characteristics (1)

- Separability: extent to which information can be separated from the associated transactions



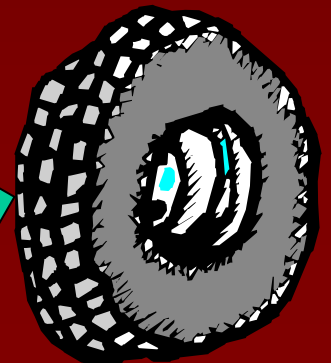
- Amount of information CAPTURED as transactions occur

Transaction Characteristics (1)

- Separability: extent to which information can be separated from the associated transactions

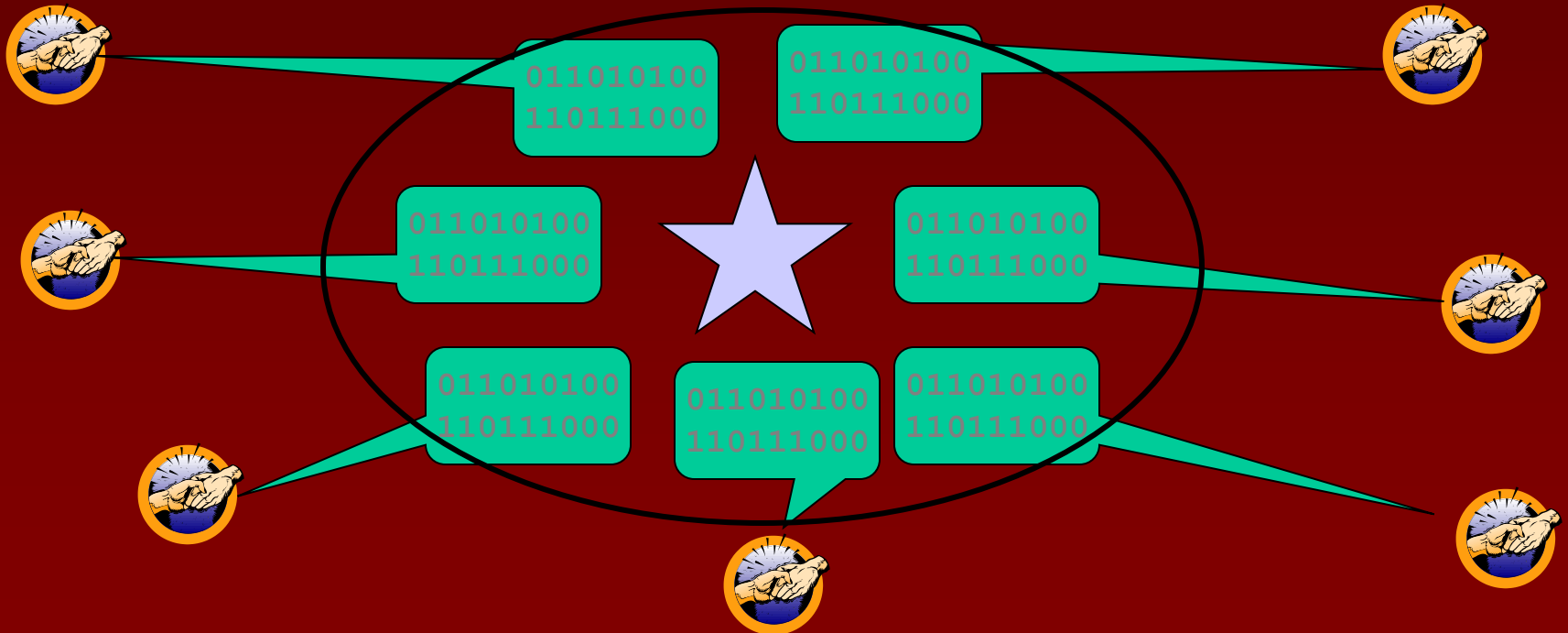
1950s
0 or 1

Today
011010100
110111000



Transaction Characteristics (2)

- Aggregation potential: extent to which the information's value is "leverageable" beyond the original transaction



The Sector: Today



Genetics



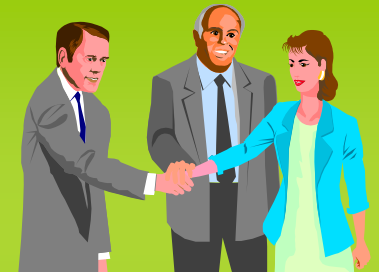
Other
inputs



Farming



Processing



Consumers

High/High

Low/Low

High/High

Tomorrow

Separability



5-YEAR YIELD
OL TEST K1
OL TEST J1
OL MAP

Potash and Phosphate Institute

The 4 Com's Come to Ag: Aggregating Sample

- J... Technology – e-
- www.1a...
- Cargill & Ariba
and suppliers
- Ocean Spray & Symbol -- ware... activity

Aggregation
potential

Two IT-Driven Change Factors



Genetics

Other
inputs

Farming

Processing

Retail

- Precision Agriculture
- “B 2 B” E-commerce

Dairy seems far ahead
Technically

But not in a
business sense

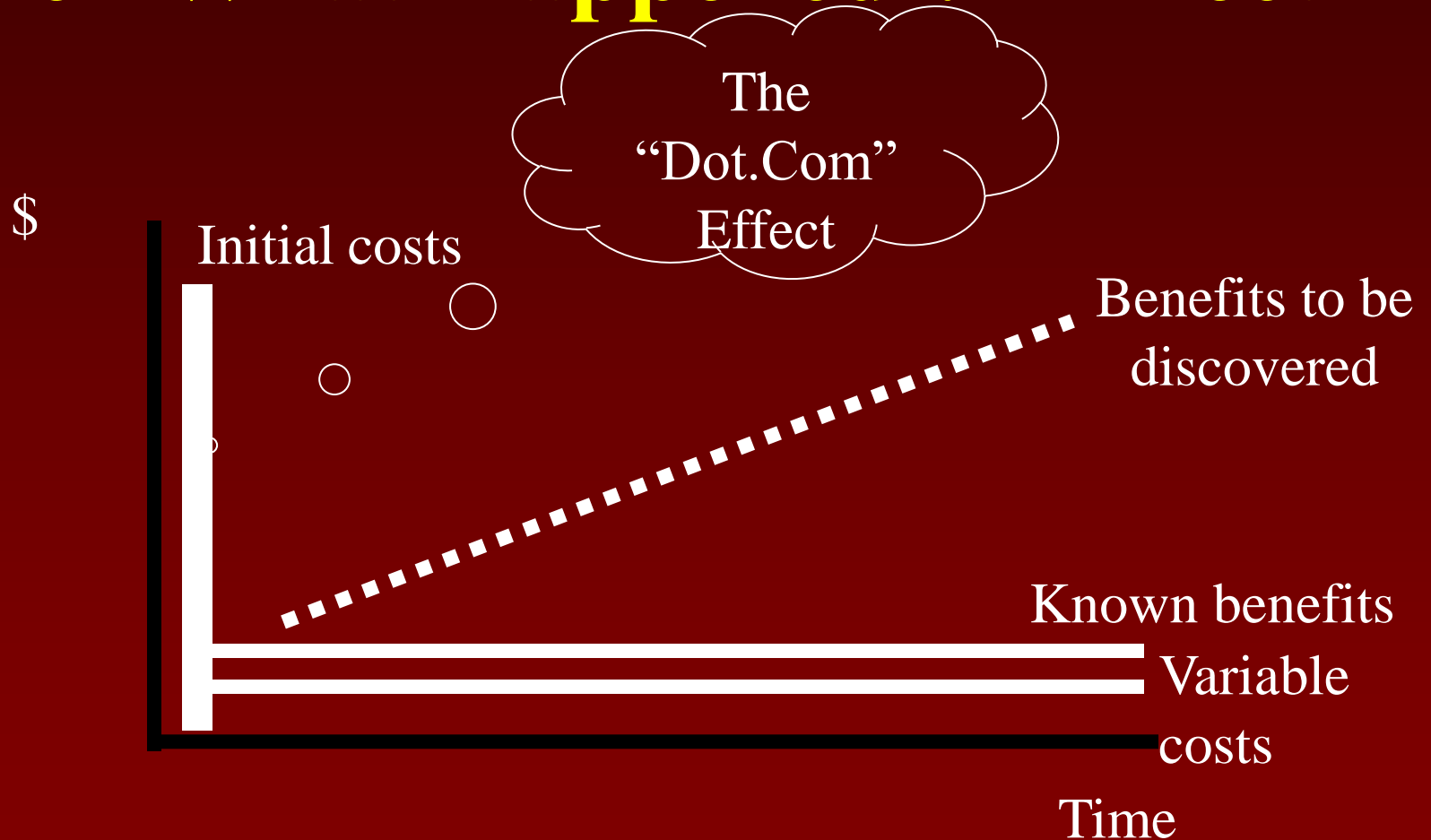
Agenda

- Industry redefinition and knowledge creation
- How information technology redefines industries
- ✓ • **Change dynamics: The “what happened” effect**

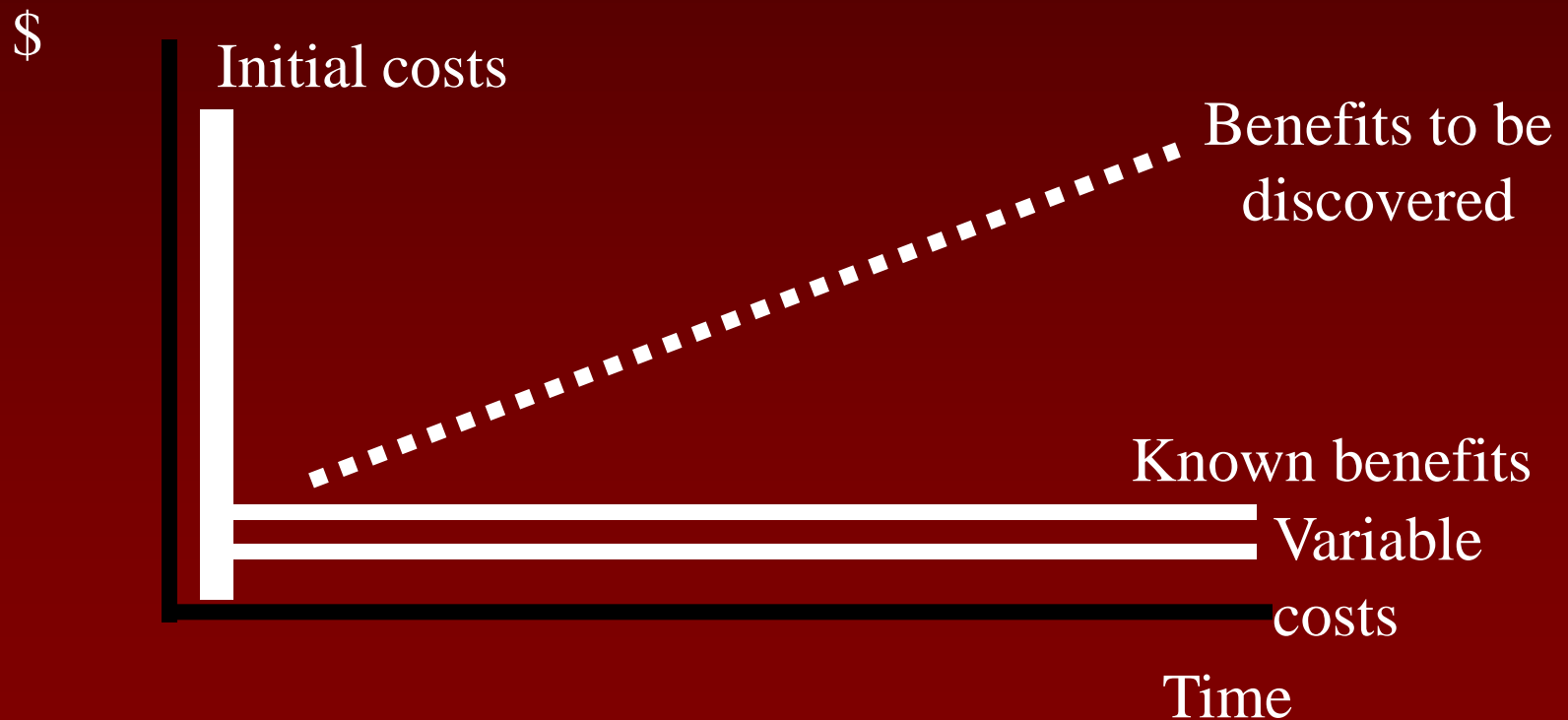
The Perverse Economics of Information Technologies

- Banks and ATM adoption
 - 2,534 US banks from 1974 to 1986
 - Over the ENTIRE period, ATM's caused major change
 - Early adopters had largest gains
 - Economic analysis EACH YEAR showed only minor potential gains

Information Economics and The “What Happened ?” Effect



Information Economics and The “What Happened ?” Effect



Forces Pushing and Pulling Towards Redefinition

e-Commerce

Food safety
traceback

Biotechnology



Precision ag

Environmental
responsibilities

Consumer segments that
desire differentiated farm output

Summarizing ...

The Three Questions

The Three Questions (1)

So...will agriculture become more vertically integrated??

YES !!!!

- Using information to be more effective
- Ownership and control
 - 1950's GM model ?
 - 1990's alliance model ?

The Three Questions (2)

Why is it so difficult to anticipate industry redefinition?

- * Separability often occurs for non-strategic reasons
- * Separability is likely to be necessary but not sufficient.
- * The potential benefits of aggregation seldom justify investment decision

The Three Questions (3)

When is the best time to invest in strategically important systems?

- If you know it will be profitable;

- It's too late !

The Three Questions (3)

When is the best time to invest in strategically important systems?

First – change your perspective of investing to include attention and time as well as \$

Then -- proactively monitor business models and information systems

-- determine how you can learn from (or with) others

-- spend \$s as you're comfortable