

Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns

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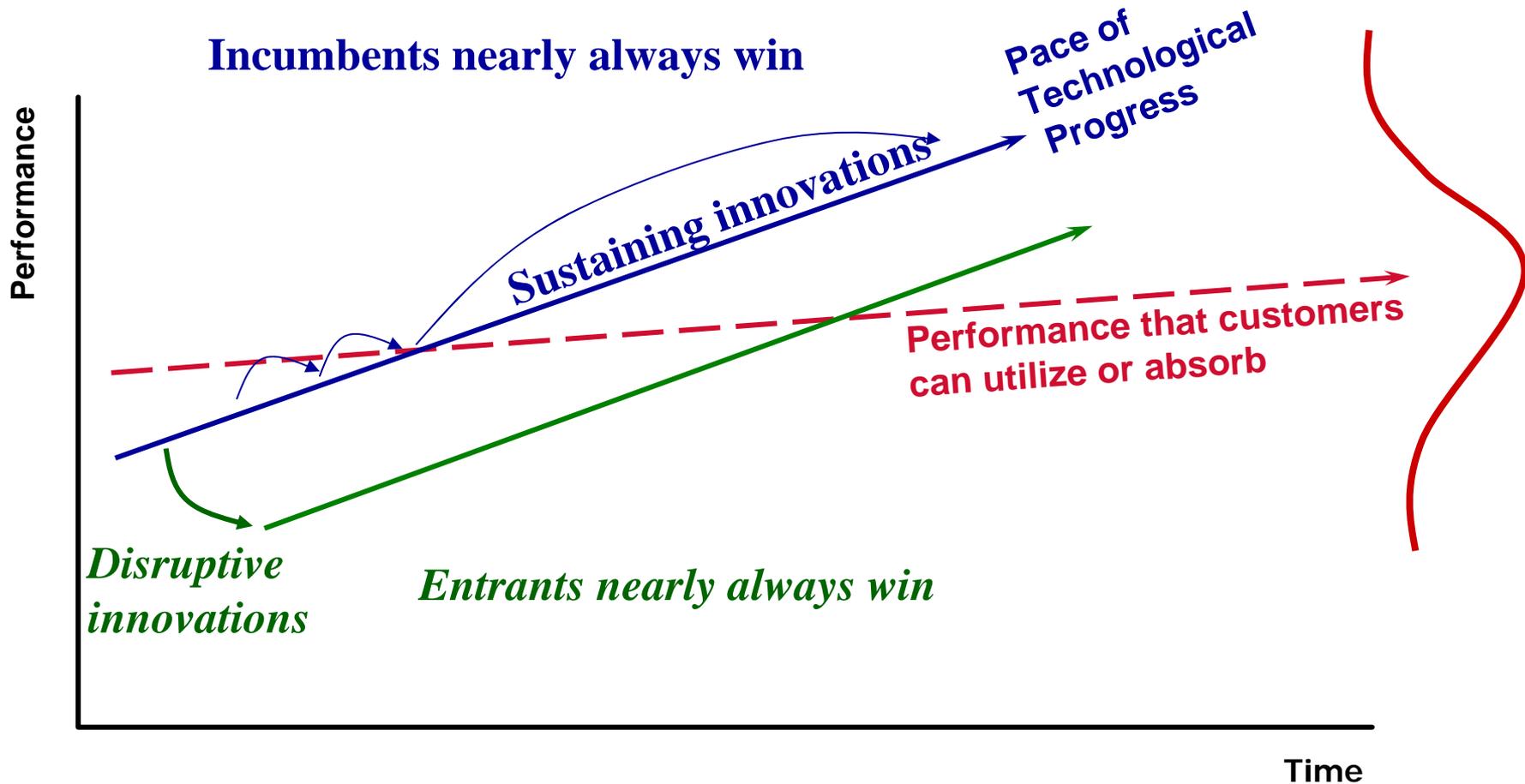
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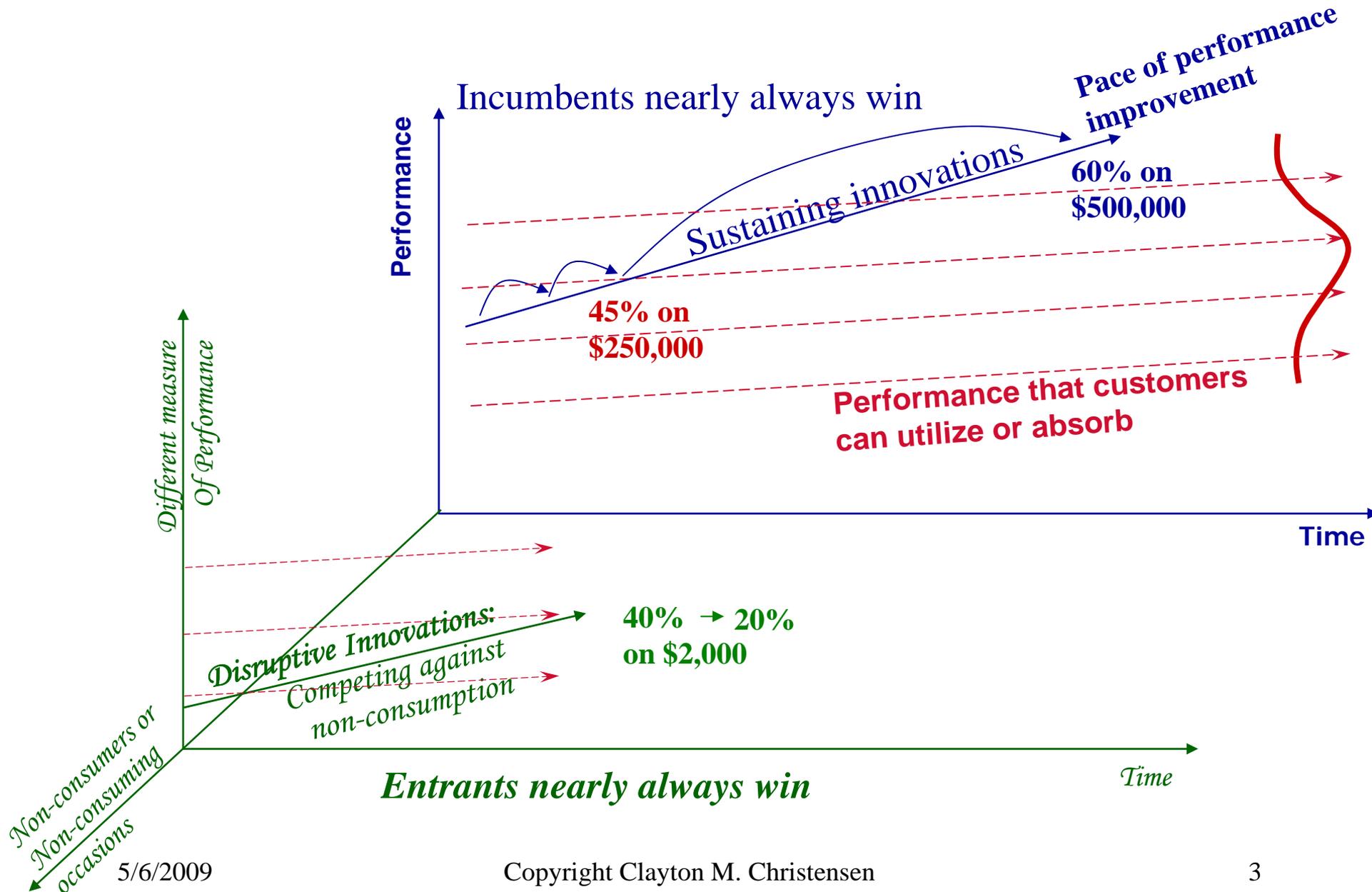
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Disruptive Technologies:

A driver of leadership failure and the source of new growth opportunities



Disruptive Innovations create asymmetric competition



5/6/2009

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Disruption in business models has been the dominant historical mechanism for making things more affordable and accessible.

Yesterday

- Ford
- Dept. Stores
- Digital Eqpt.
- Delta
- JP Morgan
- Xerox
- IBM
- Cullinet
- AT&T
- Dillon, Read
- Sony DiskMan

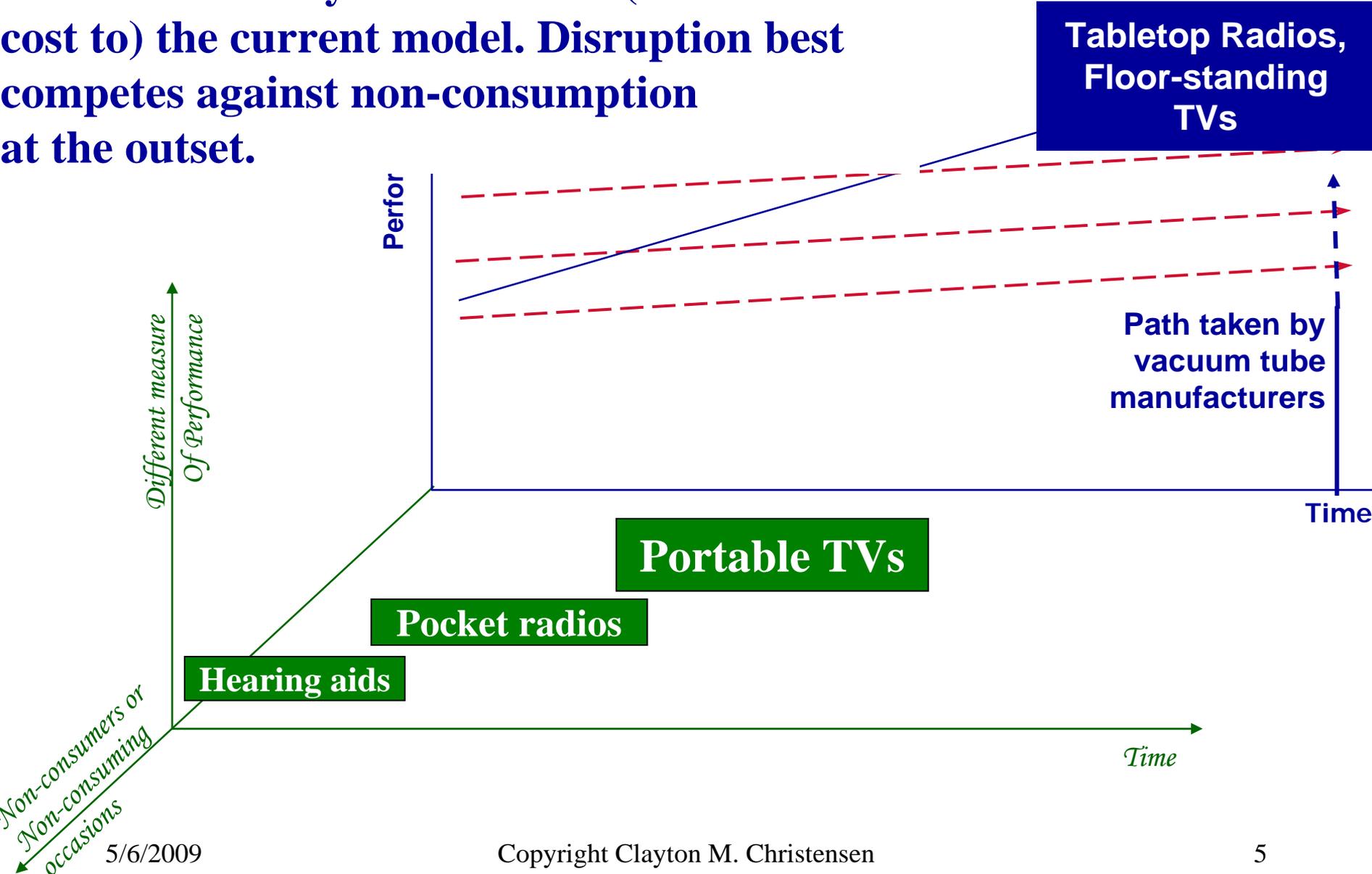
Today

- Toyota
- Wal-Mart
- Dell
- Southwest Airlines
- Fidelity
- Canon
- Microsoft
- Oracle
- Cingular
- Merrill Lynch
- Apple iPod

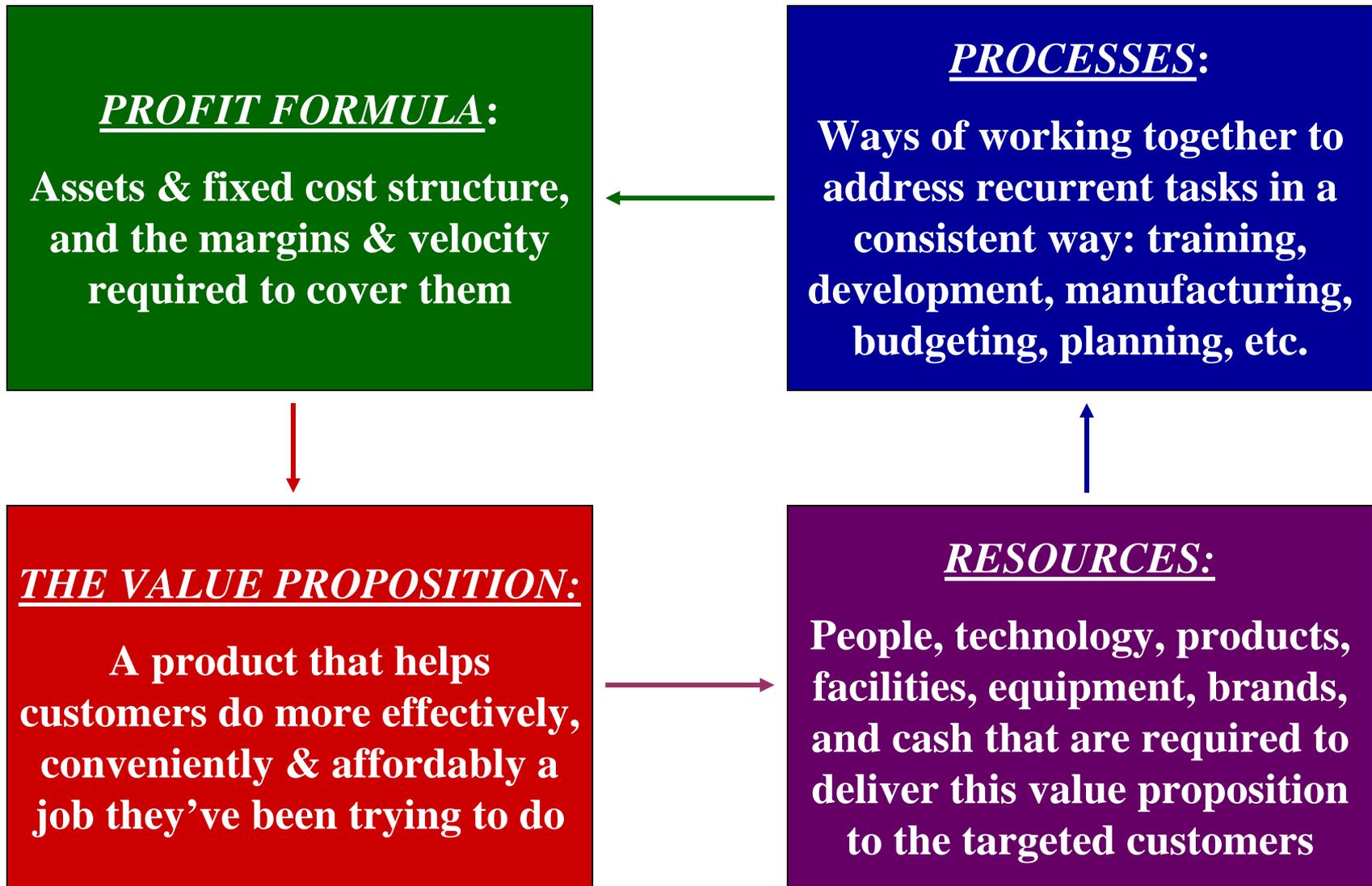
Tomorrow:

- Chery
- Internet retail
- RIM Blackberry
- Air taxis
- ETFs
- Zink
- Linux
- Salesforce.com
- Skype
- E-Trade
- Cell Phones

Technology can only be deployed in existing businesses in ways that sustain (and add cost to) the current model. Disruption best competes against non-consumption at the outset.



What is a business model, and how is it built?



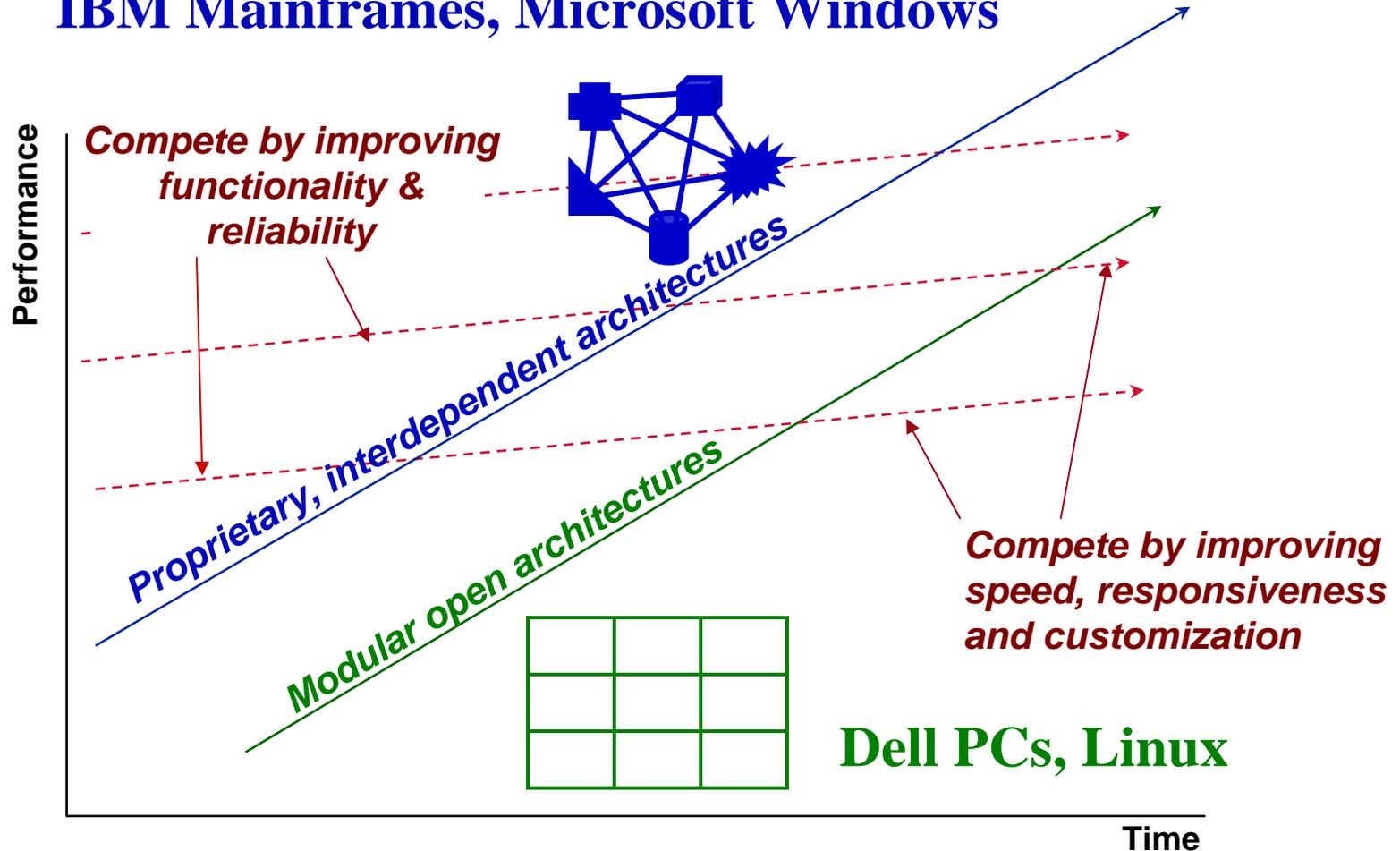
Three generic types of business models

- **Solution shops: diagnose & solve problems**
 - Consulting & law firms; advertising agencies; R&D organizations; diagnostic activities in hospitals and physicians' practices
 - Special needs education
- **Value Chains: change inputs into higher-value outputs**
 - Automobile, computer manufacturing; retailing; medical procedures after definitive diagnosis
 - Textbook business; much of classroom instruction
- **User Networks: link people so they can help each other**
 - Mutual insurance companies; banks, telecommunications, D-Life; Crohn's.com
 - Agilix' BrainHoney

Thanks to: Oystein Fjeldstad,
Norwegian School of Management

The right product architecture depends upon the basis of competition

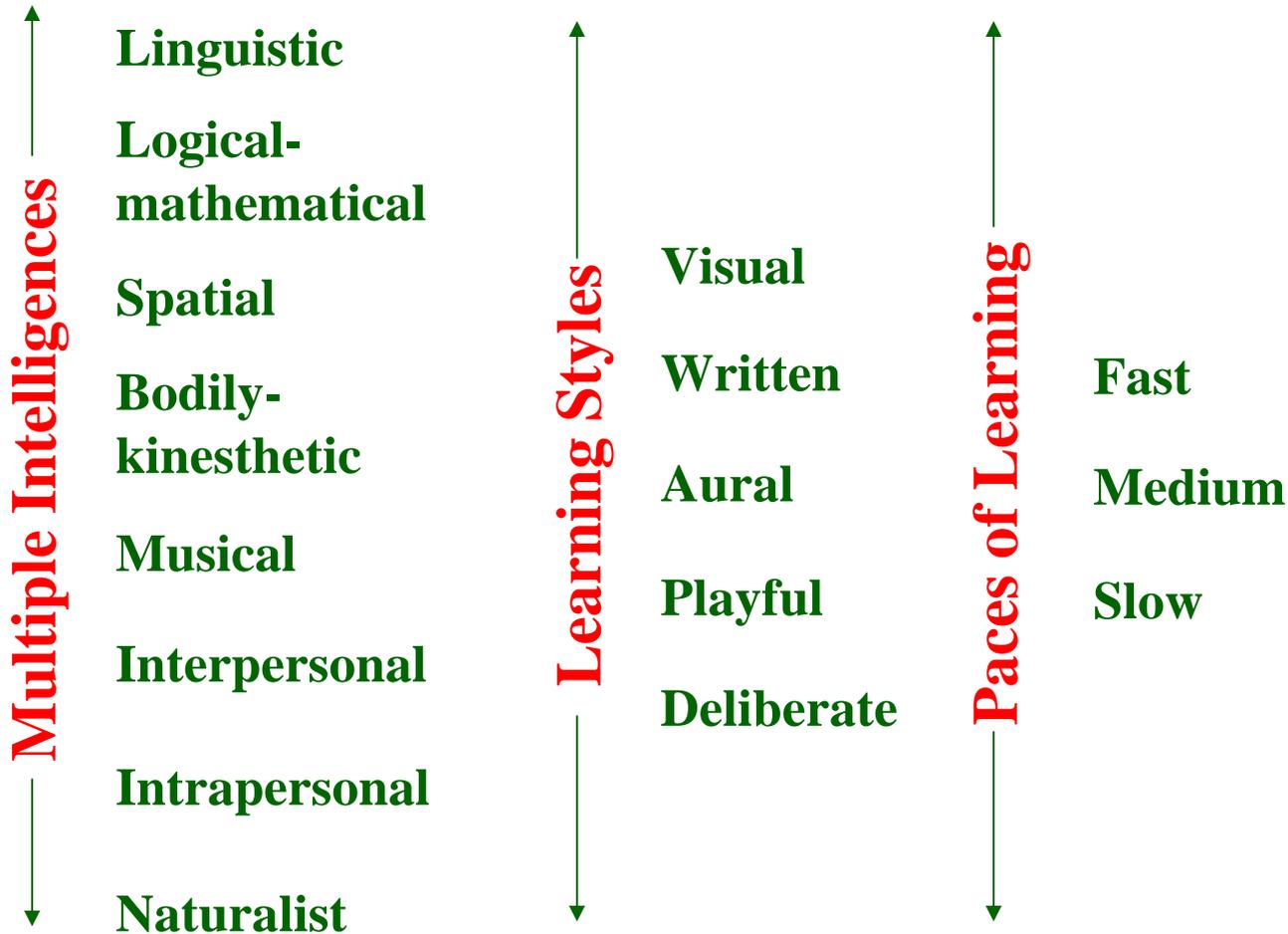
IBM Mainframes, Microsoft Windows



Insights from examining education through the lenses of this research

1. Conflicting mandates in the way we teach vs. the way we learn
2. Computers have failed to make a difference because we have crammed them into conventional classrooms
 - They must initially be deployed against non-consumption
3. Individualized, computer-based instruction requires a disruptive distribution model
4. Separation is critical. Chartered schools should be seen as heavyweight teams, not disruptive competitors
5. We have imposed disruption on our schools three times in recent history by moving the goalposts – the metrics of improvement.
6. Education research has not shown the way forward

We all learn differently

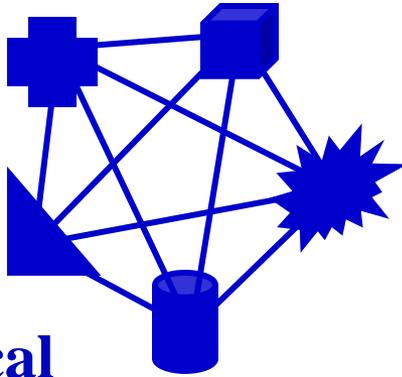


Conflicting mandates in the way we must teach, vs. the way students must learn

Interdependencies in the
teaching infrastructure

Need for customization for
differences in how we learn

Temporal
Lateral
Physical
Hierarchical



Standardization !!



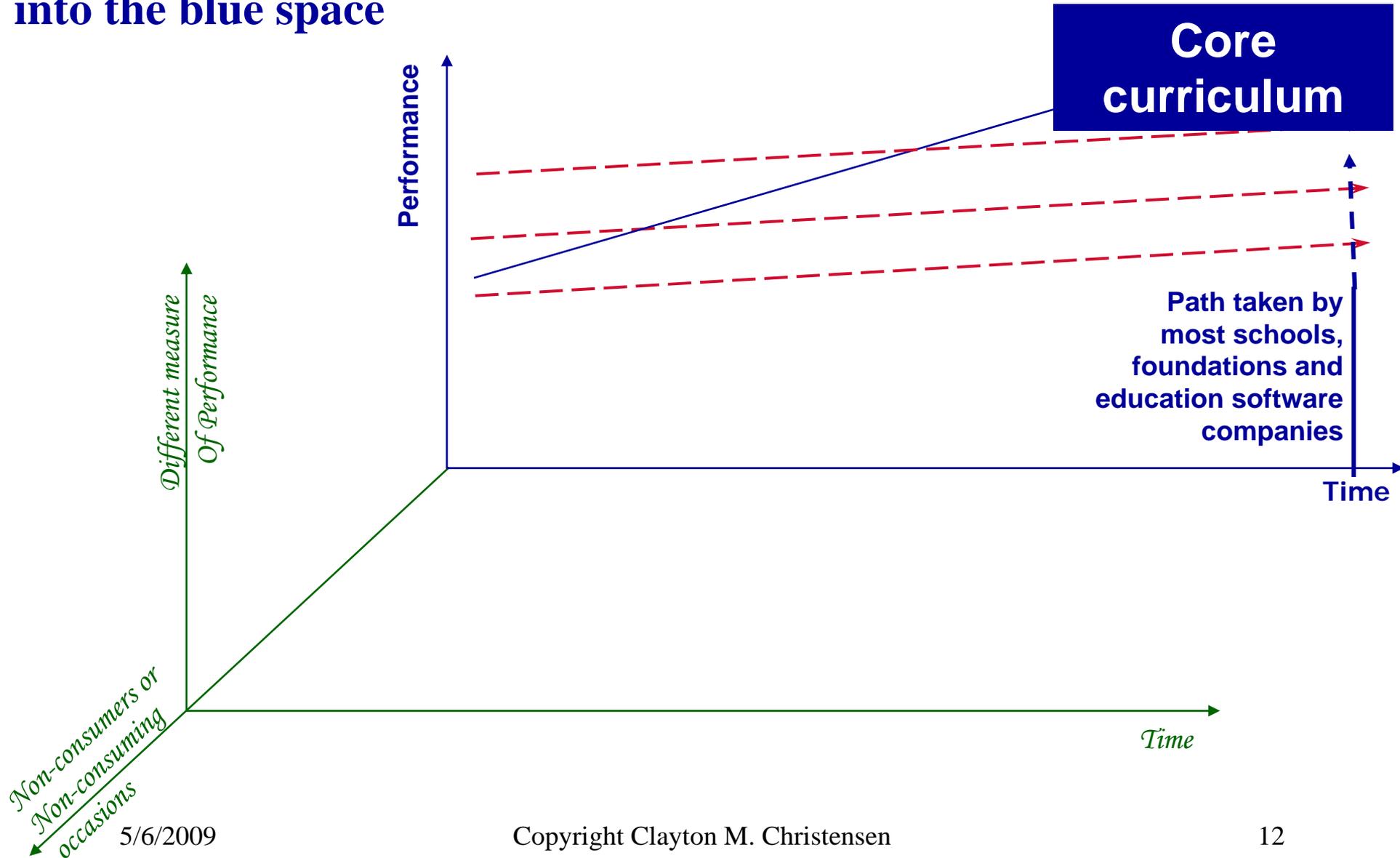
Customization !!

Multiple Intelligences

Learning Styles

Paces of Learning

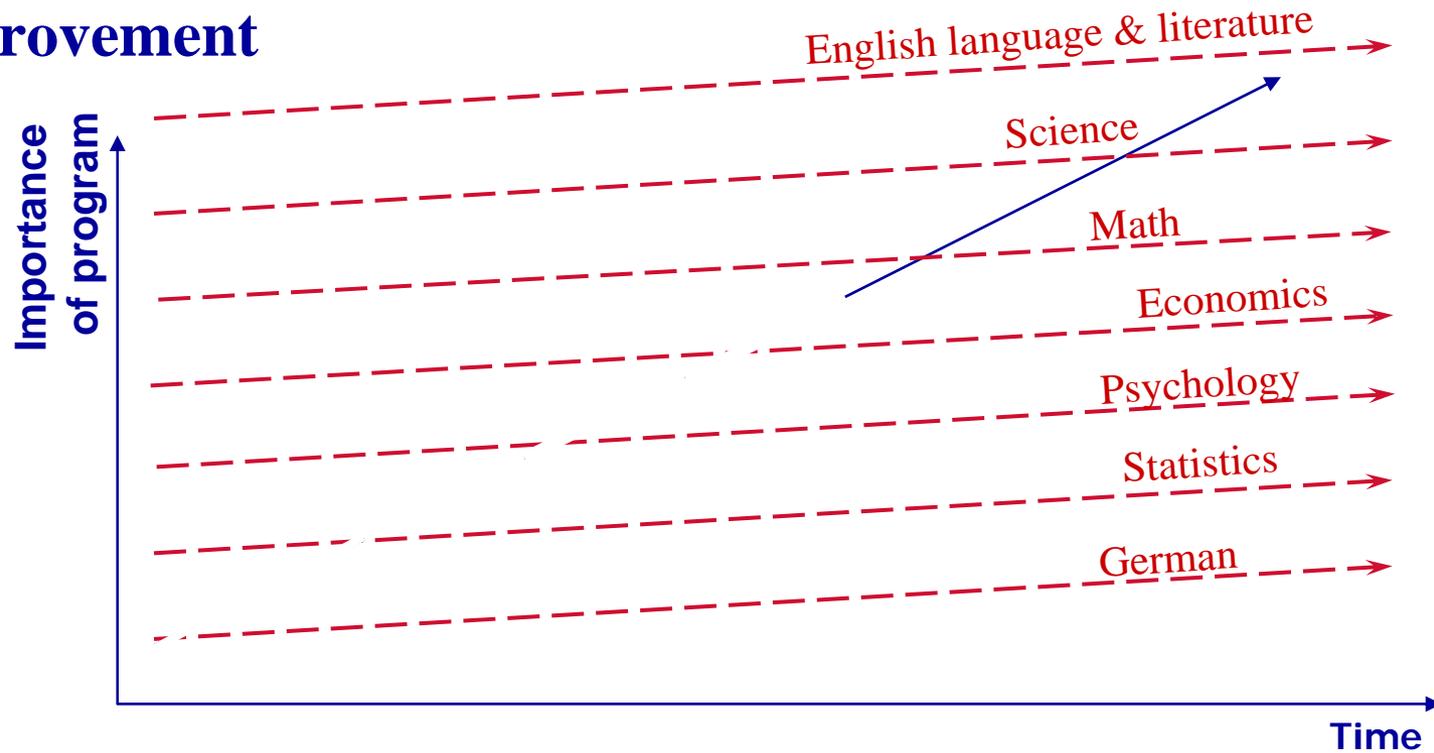
Historically, most schools have “crammed” computer-based learning into the blue space



Prime areas of non-consumption

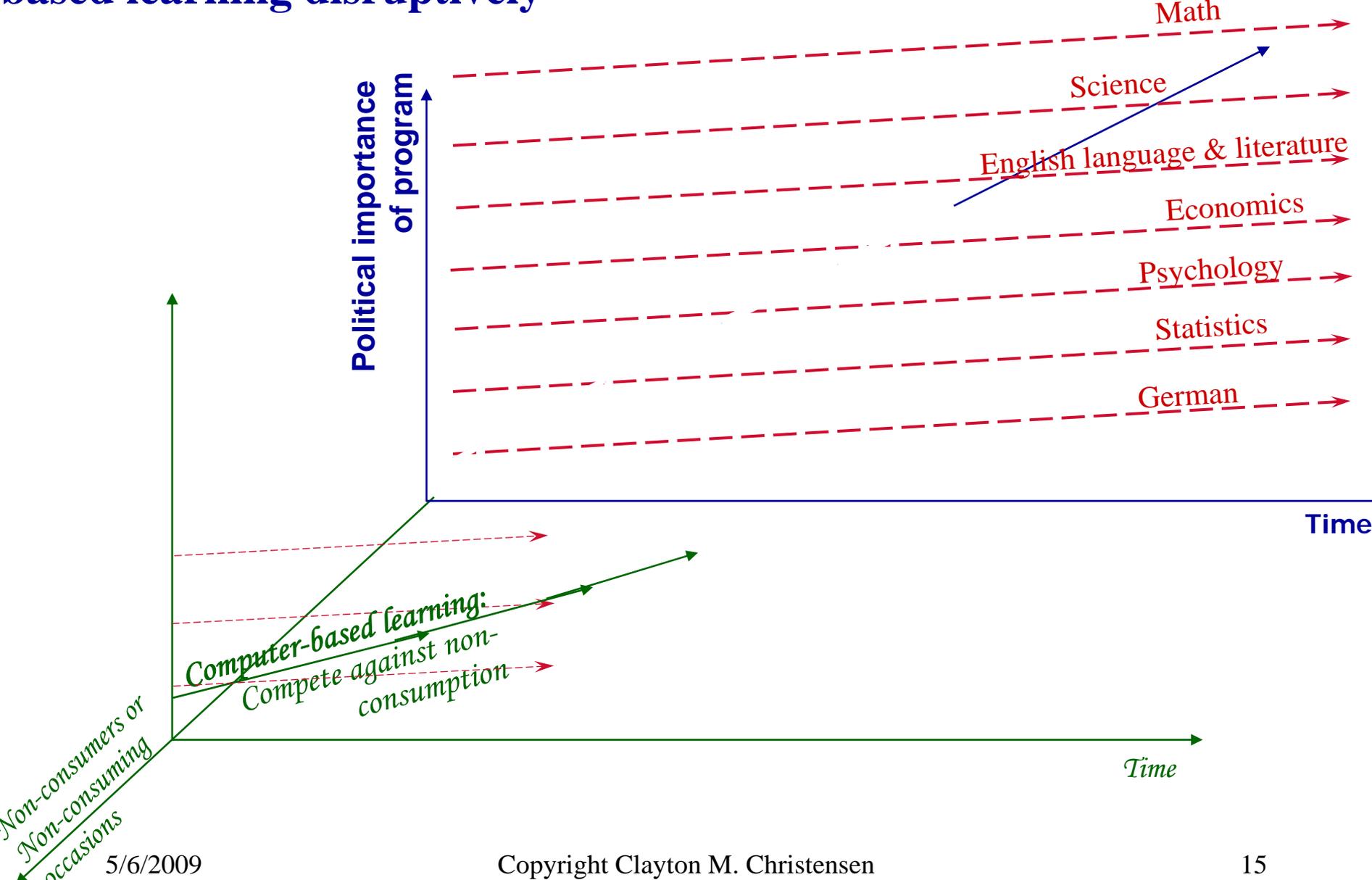
- Credit recovery
- AP Courses
- Home-schooled and homebound students
- Small, rural, and urban schools

School boards have been moving “Up-Market” to focus limited resources in the “new” trajectory of improvement

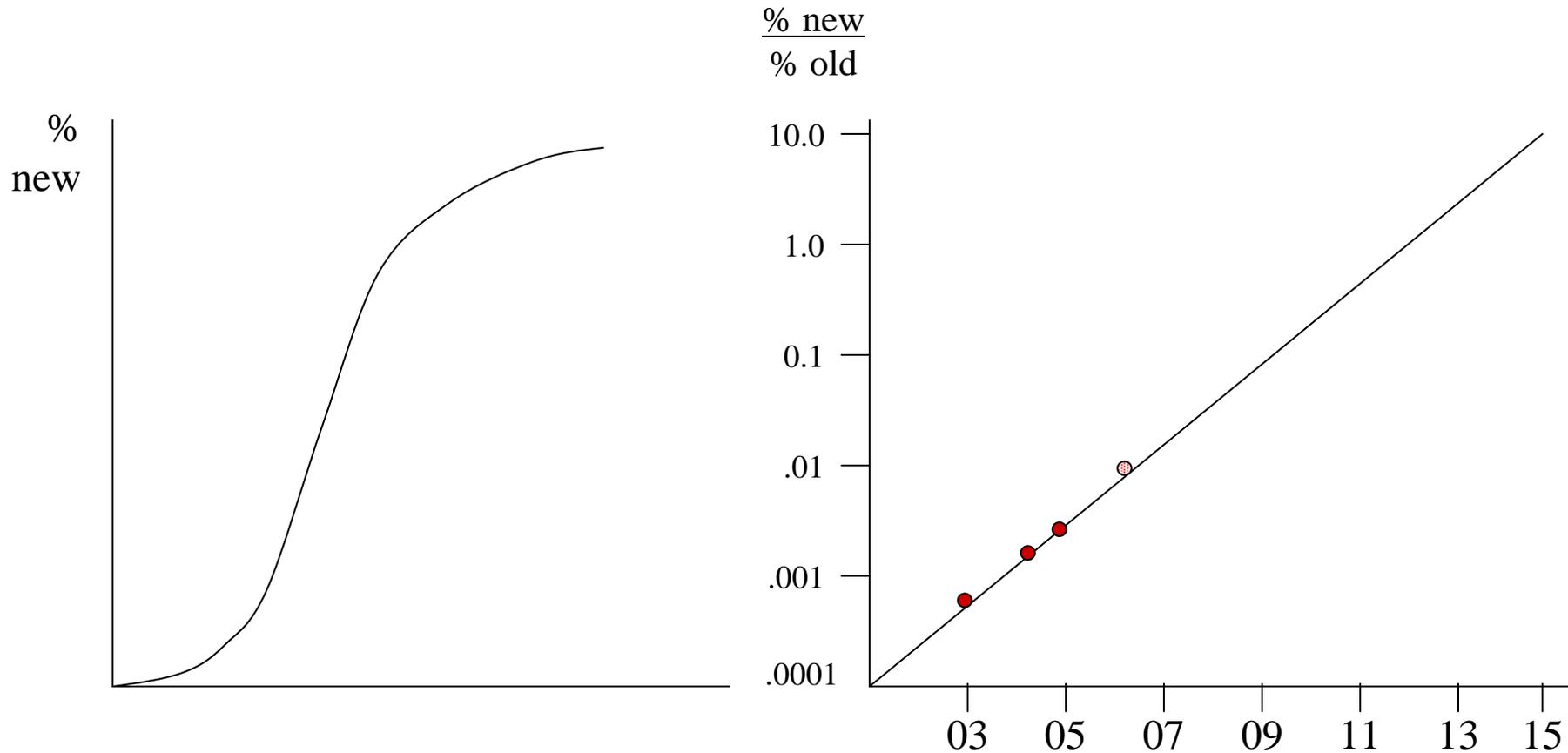


Time

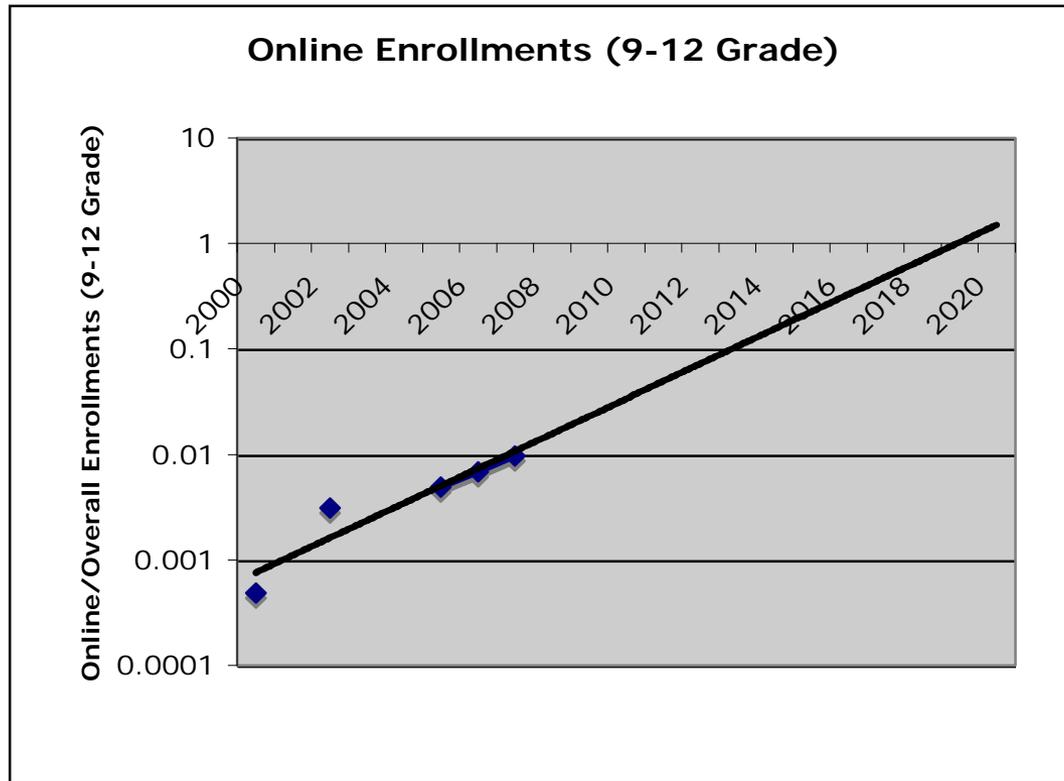
This is a perfect opportunity to implement computer-based learning disruptively



The substitution of one thing substitutes for another always follows an S-curve pattern

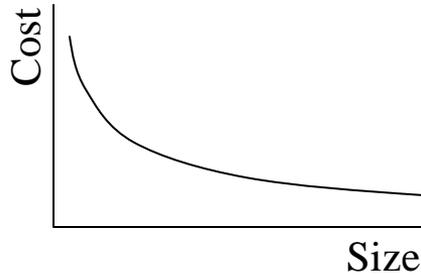
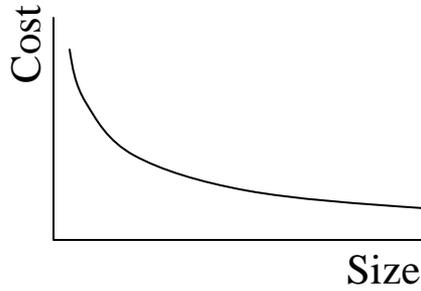
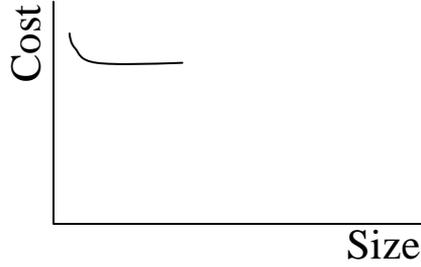
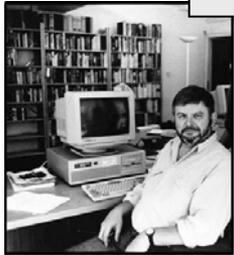


Online learning gaining adoption



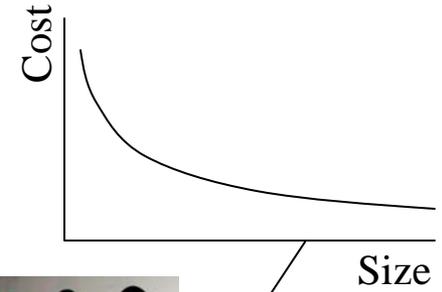
Enrollments up from 45,000 in 2000 to 1,000,000 in 2007

Disrupting the Business System of Instruction



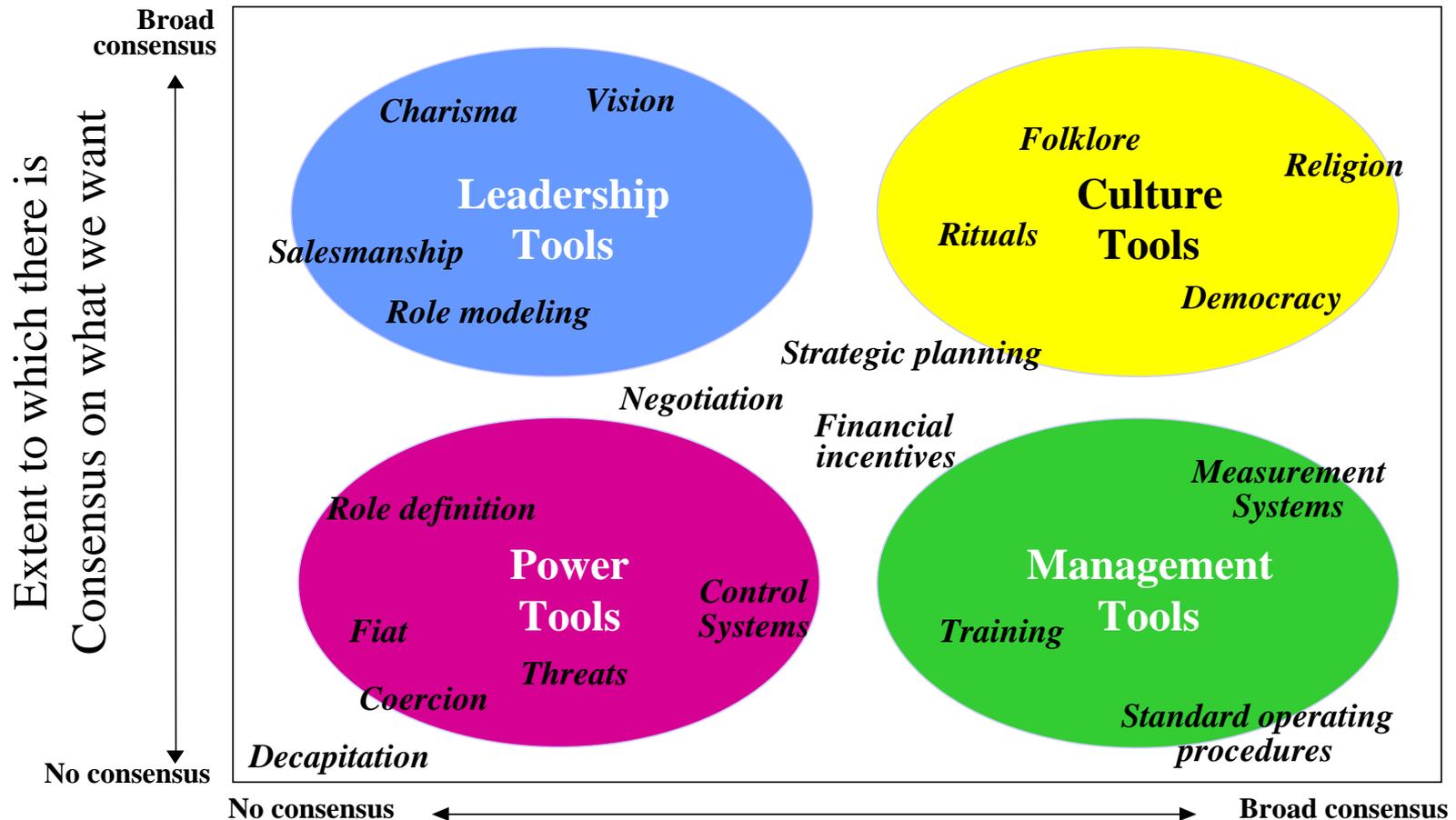
Value Chain

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User Network

The Tools of Cooperation



Extent to which there is pre-existing consensus about what actions will lead to the needed results

Proper team structure is crucial in every project

Product

Business model in which product is used

Product architecture: What are the components, and which ones interface with others?

Change the specifications for how components must fit together

Improve performance of each component

Process

Business model in which process is used

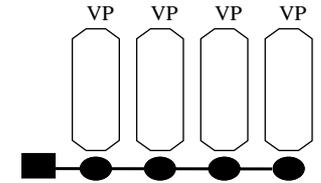
Process architecture: What are the steps in the process, and what is their sequence?

How must the steps in the process interface in time and space?

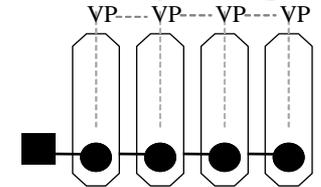
Improve individual steps in the process

Team Type

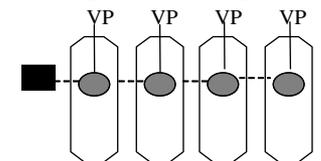
Autonomous



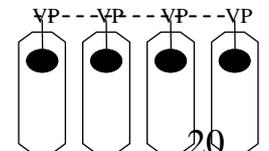
Heavyweight



Lightweight

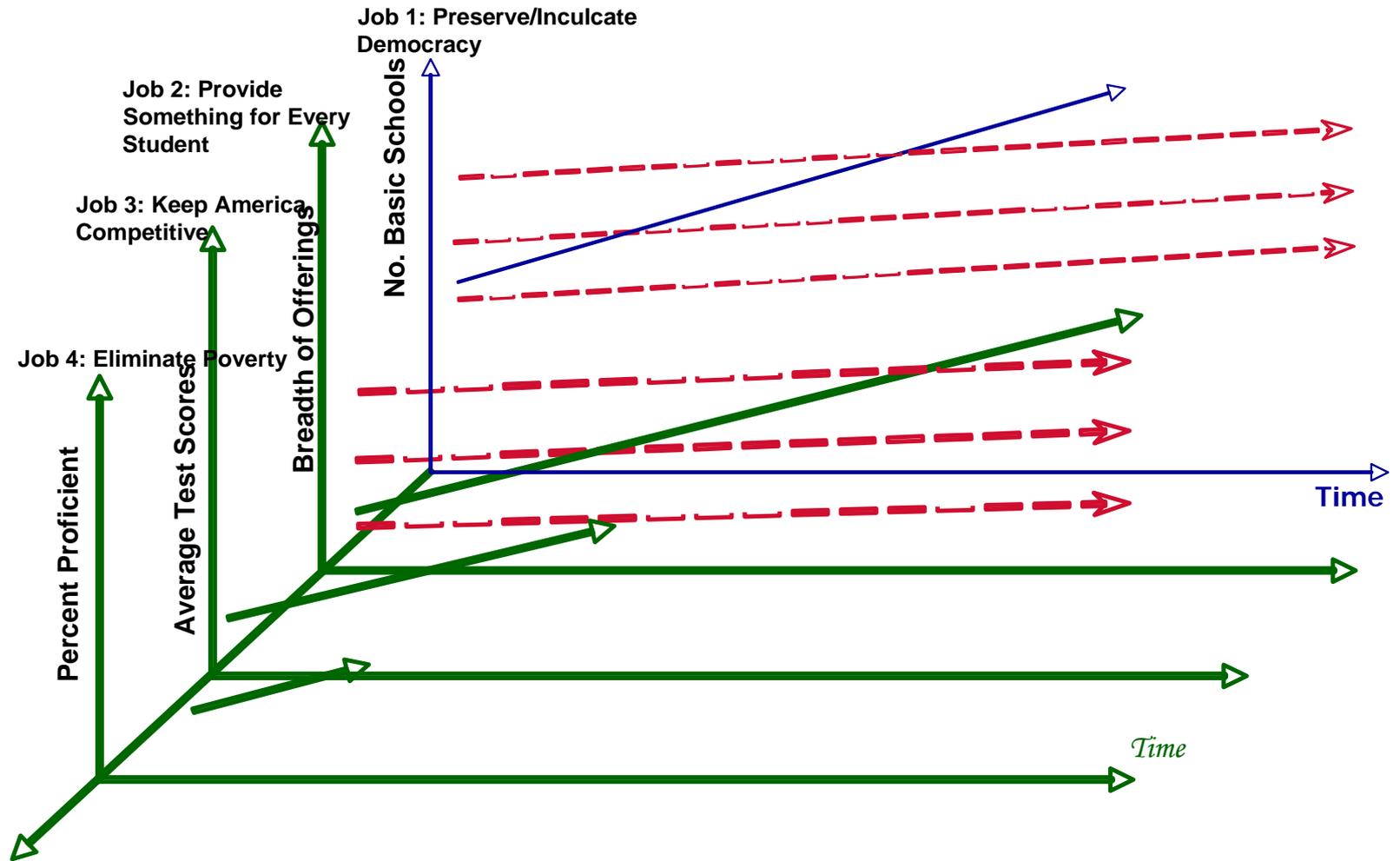


Functional



Level of change

Schools have constantly improved



Litmus tests for making grants to initiatives that have high potential to transform public education

Market Understanding that Mirrors how Customers Experience Life



**“The customer rarely buys what the company thinks
it is selling him” - Peter Drucker**

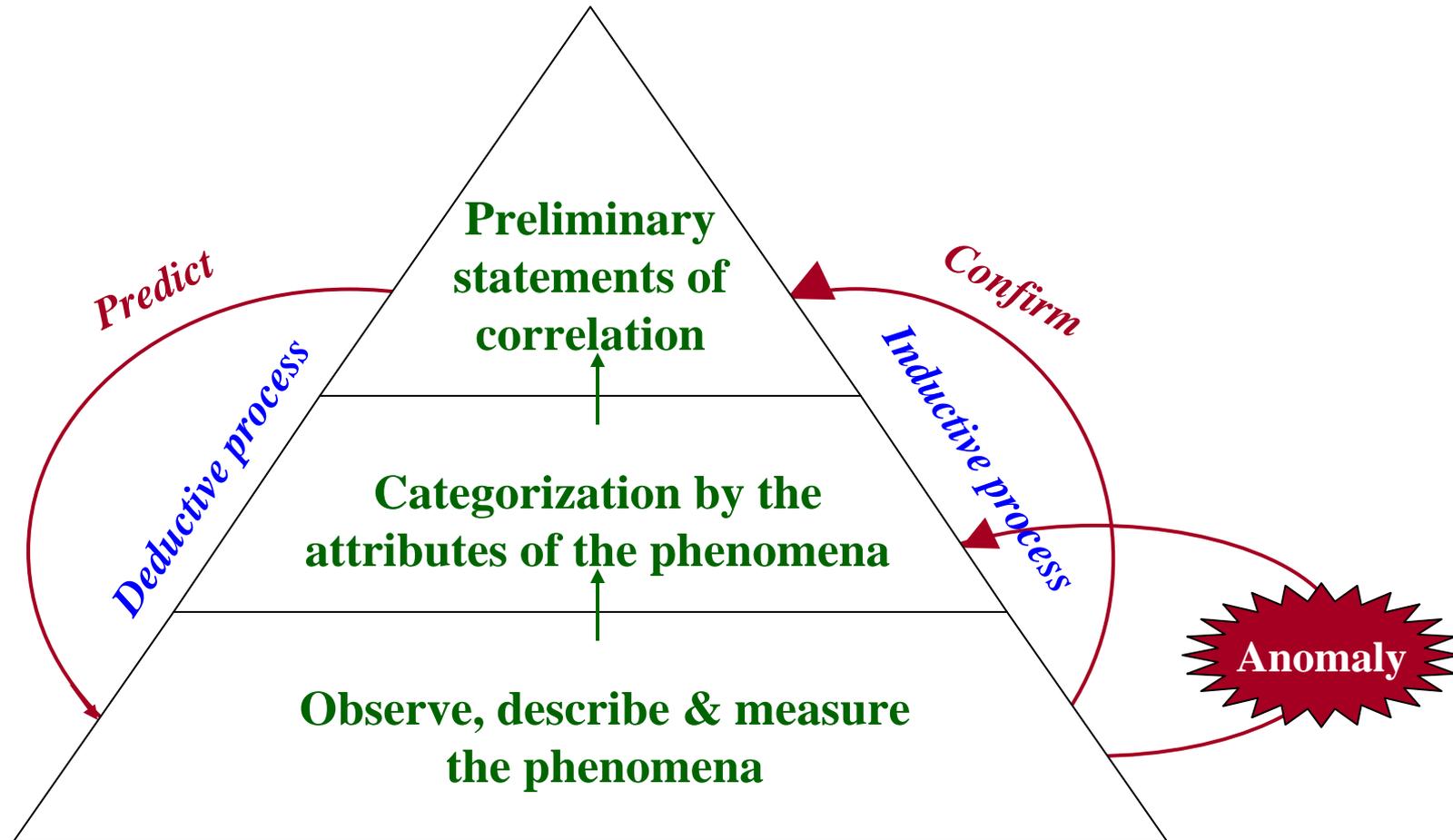
Three levels in the architecture of a job

- **What is the fundamental job or problem the customer is facing? This includes its political, functional, emotional and social dimensions.**
 - **What are the experiences in purchase and use which, if all provided, would sum up to nailing the job perfectly?**
 - **What are the product attributes, technologies, features, etc. that are needed to provide these experiences?**

Litmus tests for building successful businesses

- 1. Beating the competition: Is it a disruptive or sustaining attack?**
- 2. Target market: Do they have a sense of the job to be done? Or is this another product in a category, or something that the “average” customer says she’d buy?**
- 3. Target users: Non-consumers, or cramming it to current users of the established technology?**
- 4. Does the value proposition fit the business model that will take it to market? Is the distribution channel correspondingly disruptive?**
- 5. Are their sense of the job to be done and their product’s architecture consistent with the basis of competition?**
- 6. etc.**

The process of building bodies of understanding



The predictive power of theory improves markedly when careful researchers move beyond statements of correlation to statements of causality.

