



Joint Session of the ECE Timber Committee and the FAO European Forestry Commission

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Sources of Competition for the Forest Sector in a Global Recession

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“What’s happening is clear:
technological and market evolution are finally
catching up with this old business and is
about to wipe it from the face of the Earth.”

Adam Thierer of the Mercatus Center
In reference to Blockbuster Video, 2005

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Outline

- Summary
- Sources of Competitive Advantage



-Summary-

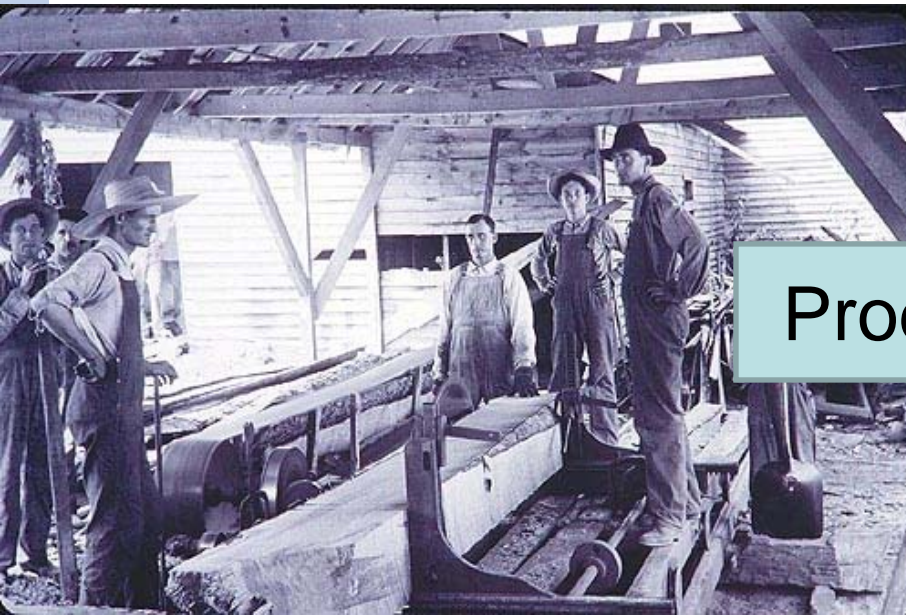
Goal is Competitive Advantage

- Adapt to Change
- Consistent Delivery
- Consistently High Product Quality
- Flexibility
- Increase Value
- Information as Power
- Lowering Costs
- Motivated Knowledgeable Workforce
- Penetrate, Secure and Maintain Markets
- Responsiveness to Customers
- Strong Exchange Partner Relationships



Sources of Competitive Advantage

Production Technology



Production



Sources of Competitive Advantage

Production Technology-Primary

3-D scanning technology evaluates each log in a sawmill or plywood mill before cutting.

Laser /computerized scanning optimizes further processing such as sawing, edging, planing, sanding, veneer clipping, sorting.

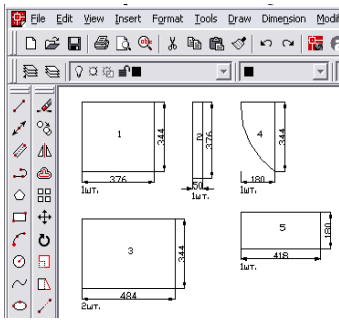
Improved adhesive chemistry, application technology, adhesive extenders and new catalysts for plywood.



Sources of Competitive Advantage Production Technology-Secondary

Computer-Aided Design/Computer-Aided Manufacturing (CAD/CAM)

Computer Numerical Control (CNC)-Automated machine tools, such as drills and lathes, that operate from instructions in a program. CNC machines offer unsurpassed accuracy and repeatability.



Robotics



Sources of Competitive Advantage

New Products

Engineered Wood Products - Consist of a combination of smaller components to make a structural product, designed using engineering methods. They are an alternative to traditional sawn lumber and can use smaller diameter trees.

Some examples of engineered wood products are: I-joists, trusses, and Structural Composite Lumber (SCL) that includes laminated veneer lumber (LVL), parallel strand lumber (PSL), and laminated strand lumber (LSL).



Sources of Competitive Advantage

New Products

Wood-Plastic Composites (WPC)-Made of recycled plastic and wood wastes used in numerous applications, such as, outdoor deck floors, railings, fences, landscaping timbers, park benches, window and door frame (Kim and Pal, 2011)



Tiger Bullets™ - New type of plastic-and-wood composite that prevents lost circulation in oil-drilling wells. is made of recycled plastics, recycled cellulosic fibers. Invented by Dr. Qinglin Wu, LSU AgCenter.



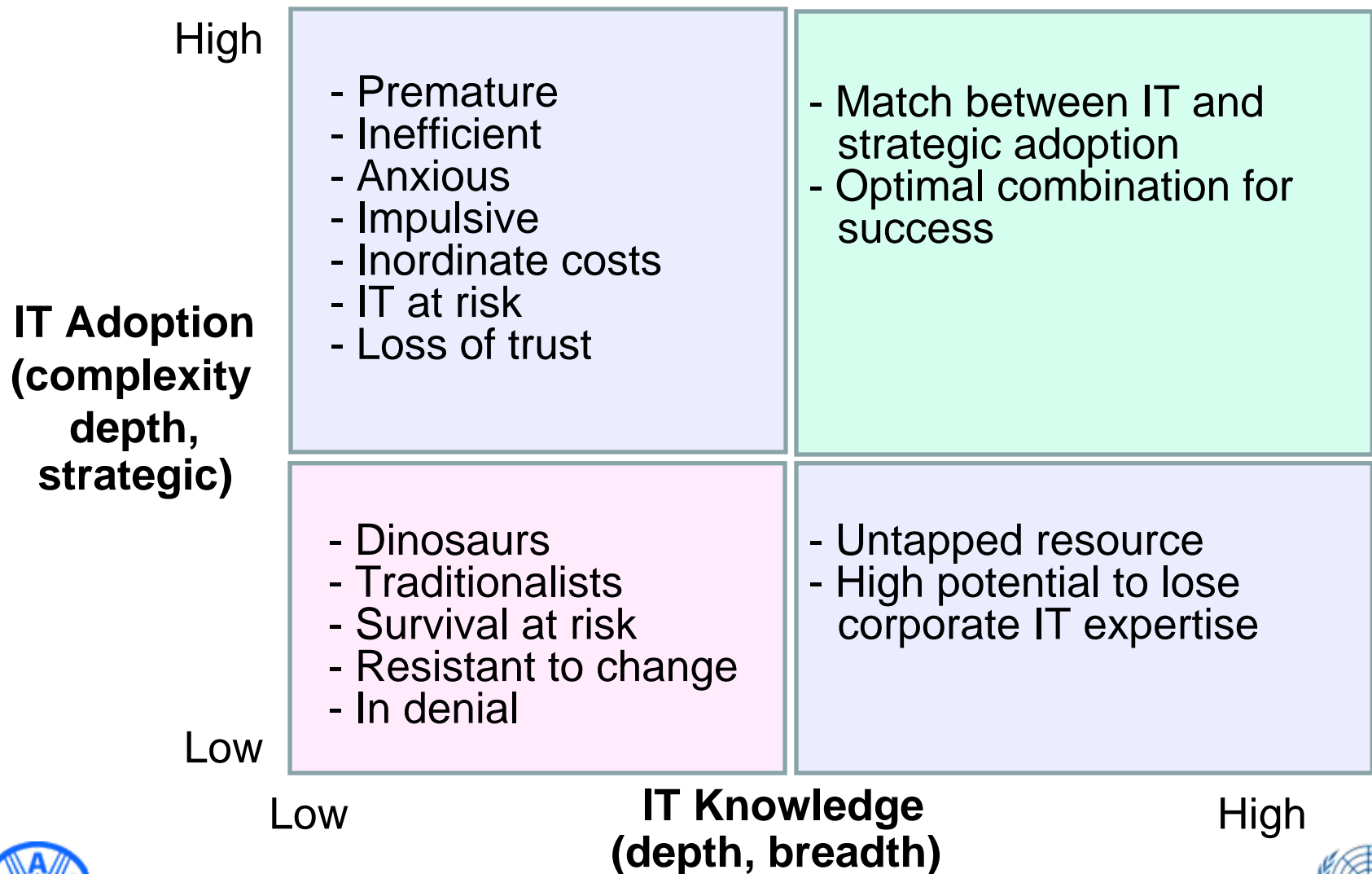
Sources of Competitive Advantage Information Technology



Information



Information Technology Implementation/Success Matrix



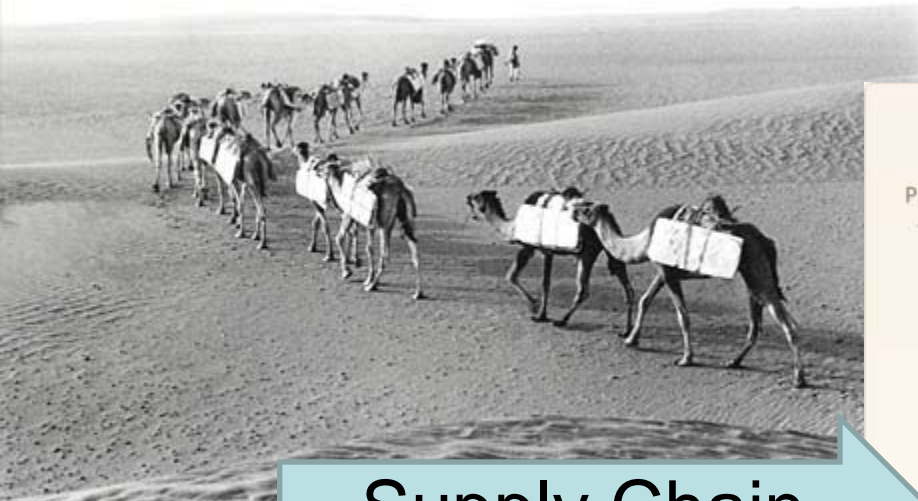
(Vlosky 2000)

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Sources of Competitive Advantage

Supply Chain/Interorganizational Management



Supply Chain



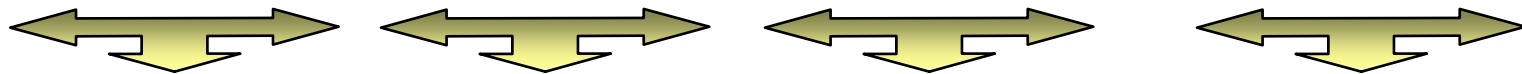
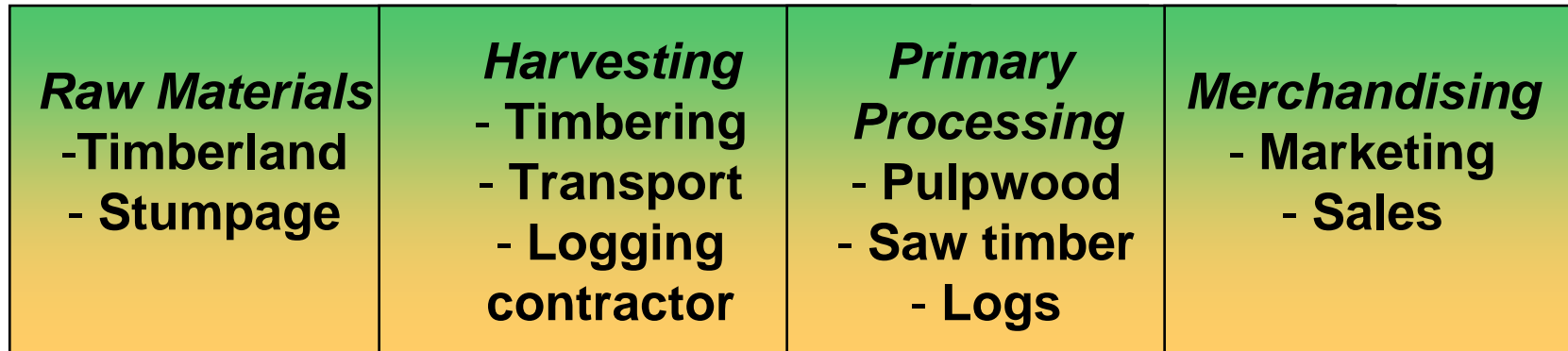
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Supply Chain/Interorganizational Management

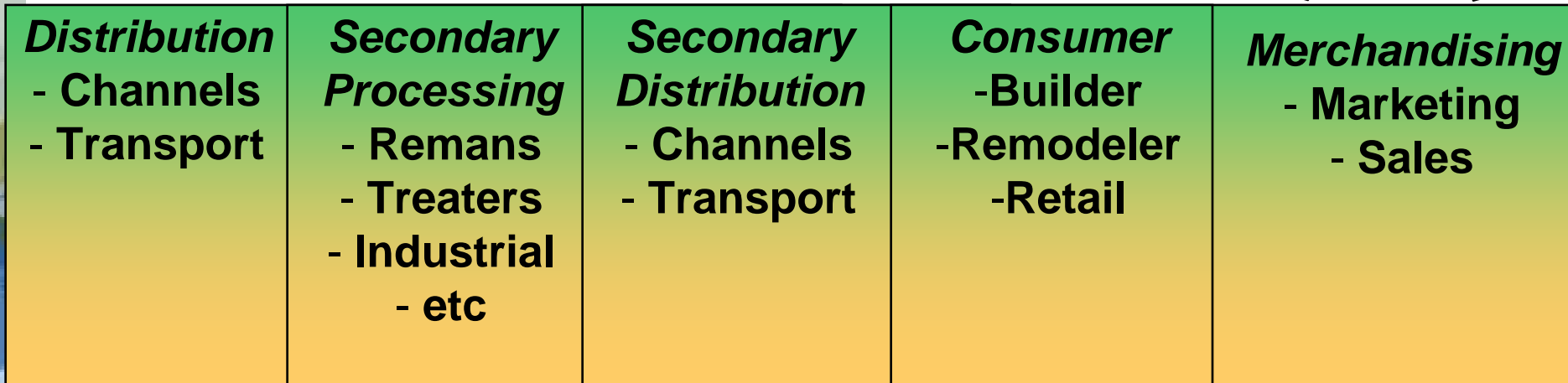
- Collaboration between companies
- Training and support
- Communication with suppliers & customers
- Data Interchange
- Production/buyer demand coordination



A Typical Forest Products Supply Chain

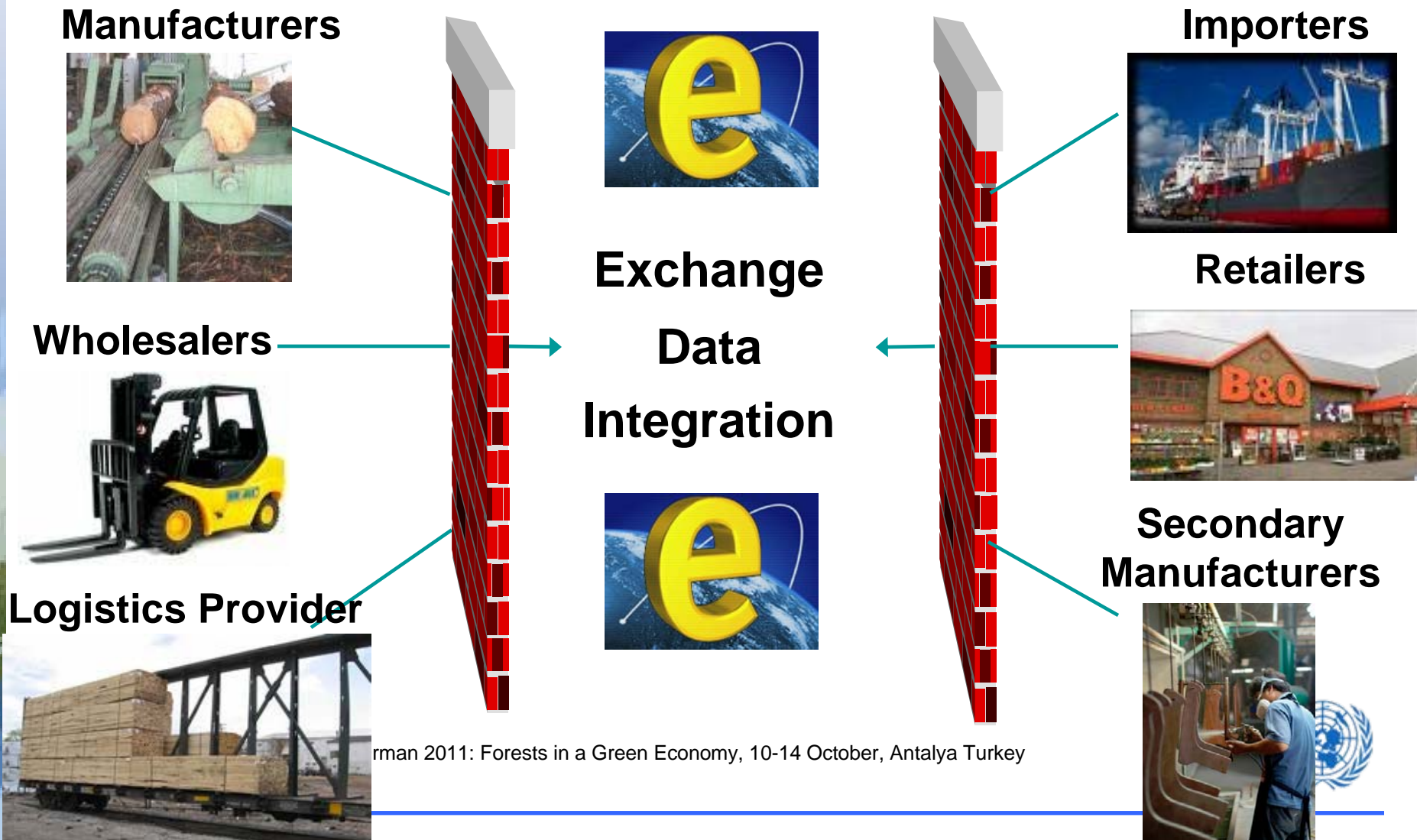


Information Interfaces



Sources of Competitive Advantage

Supply Chain/Interorganizational Management



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Sources of Competitive Advantage Innovation

- Innovation is an idea, practice, or object that is perceived as new to an individual or another unit of adoption (Dewar and Dutton, 1986).
- The terms innovative and innovation are used to describe the flexibility of firms in meeting changes in the business environment (Tyson, 1997).
- Innovation is the engine of economic development (Schumpeter, 1911 in Cao and Hansen, 2006).
- Adapting to changes in competitive markets through innovation is necessary for firms to survive (Bullard, 2002).



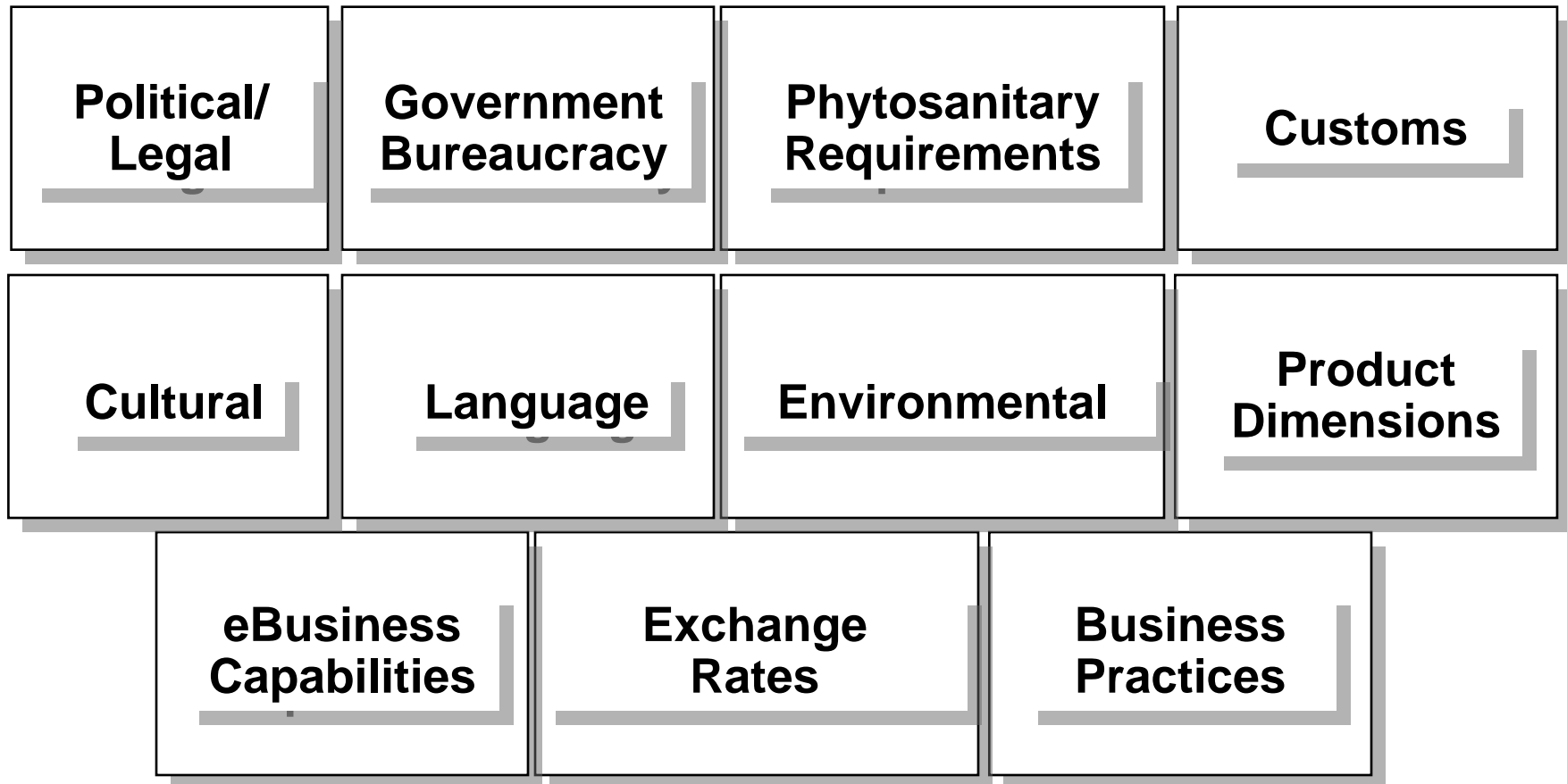
Sources of Competitive Advantage Innovation

- Innovation has long been recognized as critical to a firm's competitive advantage (Damanpour and Gopalakrishnan, 2001; Scarborough and Zimmerer, 2002).
- Many activities can constitute innovation such as new product development, product line improvements and extensions, improvements in production processes, and innovative marketing and management practices (Wagner and Hansen, 2005).
- Although the most familiar forms of innovation are new or improved products or manufacturing systems, innovation can also take place in business management processes (Nybakk *et al.*, 2009).

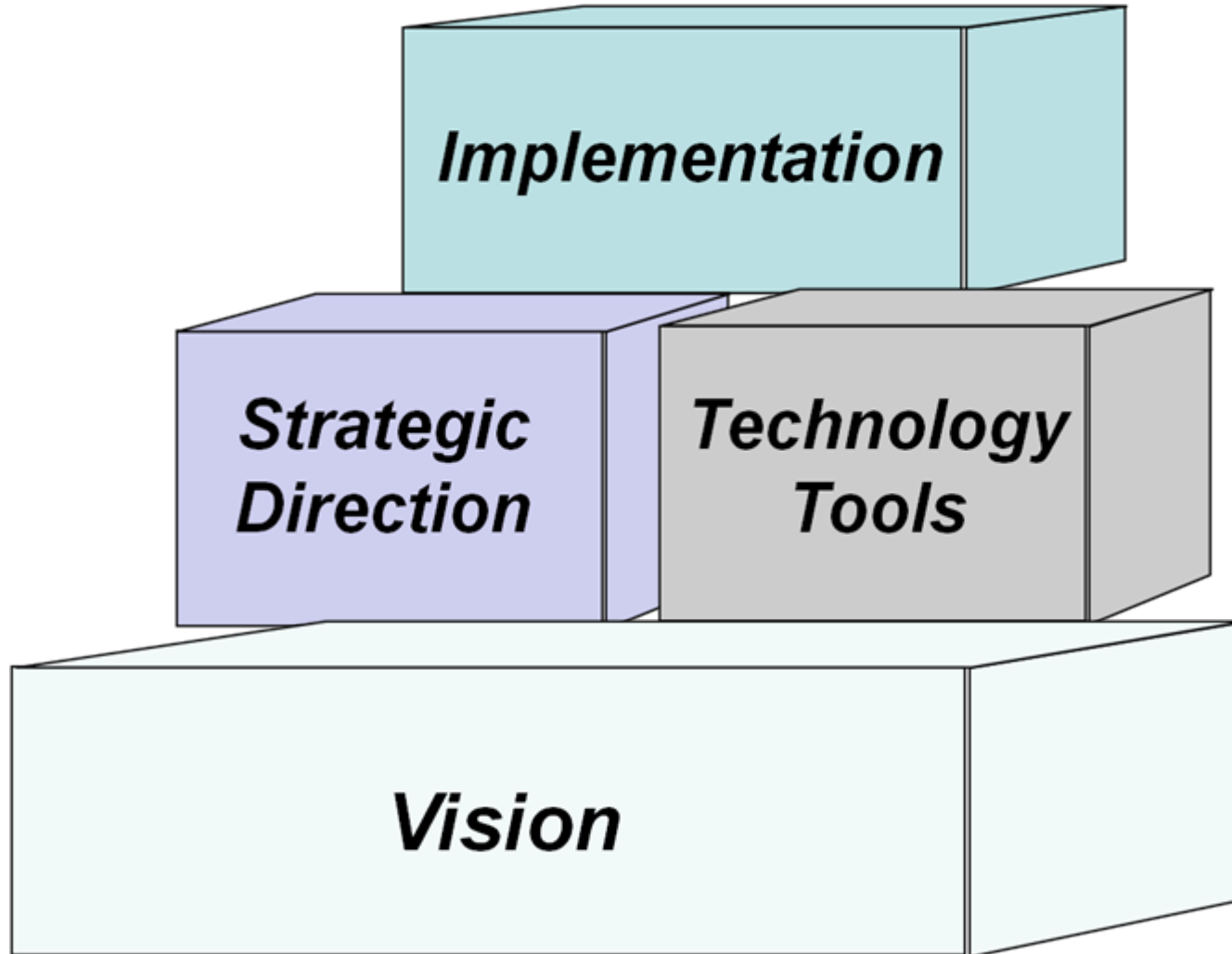


Sources of Competitive Advantage

Understanding Export Markets



Building Blocks to Developing Competitive Advantage



Take Away Message

The firms that will emerge as winners are those that:

1. Are not complacent in the changing business environment
2. Understand the changes taking place in supply and customer chains
3. Identify and implement new sources of competition
 - a) Production, New Products, Information Technology, Supply Chains, Innovation, Export Markets
4. Understand markets and factors that will shape purchase decisions
5. Become a source of value to customers





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Thank You

