

Class 6, 5/12/04

Attendance	discussion	10
Urban Dynamics extra credit problem	Overhead	20
5D Chapters 6 & Appendix 2 on the Systems Archetypes	LCD projection & discussion	45
Break		10
Class 6 slides on improvement, "limits to growth" structures, product life cycle "S-Curve", & overshoot and collapse.	LCD projection & discussion	40
Break		10
Reflection papers	discussion	5
Answers to adding links to 5D diagrams	LCD projection & discussion	20
Stocks and flows - assignment	Overhead projection & discussion	10
		170

5D. Chapter 7: The Principle of Leverage

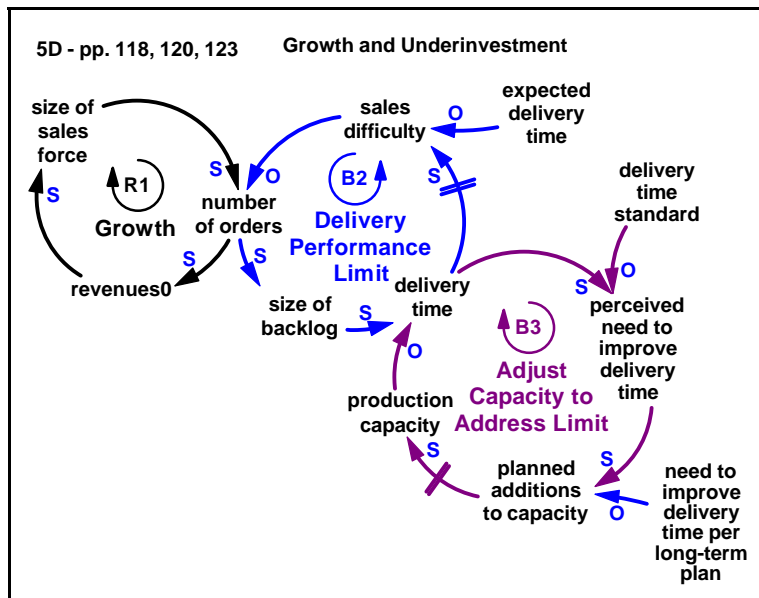
Another Archetype

Growth & Underinvestment

(note: I forgot to show both the delays on archetype handout & the "need to improve delivery time per long-term plan" variable.)

problem, but we can't rush into major investments unless we're certain demand will be sustained.' They didn't realize that demand would never be sustained until they made the investment."

- "It is the gradualness of the eroding goals and declining growth that makes the dynamics of this structure so insidious. This is the structure that underlies the "boiled frog" syndrome ..."



- "For an entire industry, the result is increasing vulnerability to foreign competitors with higher standards, happening so slowly that it's difficult to detect, often masked by "shifting the burden" palliatives such as increased advertising, discounting, "restructuring," or lobbying for tariff protection."
- "In my opinion, the dynamics of eroding goals and underinvestment lie at the heart of the demise, between the mid-1960s and mid-1980s, of many American manufacturing industries, such as steel, autos, machine tools, and consumer electronics. In each of these industries, loss of market share to foreign competitors, which was invariably blamed on external factors, had its origins, at least in part, in weak standards for customer satisfaction, underinvestment, and unhappy customers."

- "WonderTech's fate could have been reversed."
- "There was a point of leverage in the structure: the firm's original commitment to an eight-week delivery time."
- Continuing financial stress is both the cause & "consequence of underinvestment."
- "His counterpart in manufacturing acknowledged that they occasionally got behind their backlogs, but only when their capacity was inadequate.. But the top managers said, 'Yes, we know it's a

- customers."
- Story about "Digital Equipment" avoiding the underinvestment trap.
- "The art of systems thinking lies in being able to recognize increasingly (dynamically) complex and subtle structures ... [and] ... in seeing patterns where others see only events and forces to react to.

5D. Chapter 8: The Art of Seeing the Forest and the Trees

- “... the fundamental ‘information problem’ faced by managers is not too little information but too much information. What we most need are ways to know what is important and what is not important, what variables to focus on and which to pay less attention to — and we need ways to do this which can help groups or teams develop shared understanding.”
- The story of People Express Airlines.
- “... People Express *could* have been an enduring success”
- “The key is strengthening the ‘fundamental solution’ of building service capacity. This is best done by *limiting* demand growth and by a commitment to service quality.”
- “Many have suggested that People grew too fast, but the leverage lies in pricing somewhat higher, both to slow down growth *and* to increase profits to invest in building service capacity.”
- “In the end, People Express’s executives’ belief that the enemy was ‘out there’ kept them from seeing the contradictions in their own policies and strategies.”