

Lecture 1

First, a distinction... Invention vs. Innovation

- Invention: creation of an idea of how to do or make something (usually by an individual)

"the first occurrence of an idea for a new product or process" (Fagerberg 2004 p.4)

- Innovation: making an idea for a new product or process real, putting it into practice

"the first commercialization of an idea" (Fagerberg 2004)

- Once we get to Intellectual Property Rights, we will see the differences/overlaps

- **Basic research** is experimental or theoretical work undertaken primarily to acquire new knowledge about observable phenomena and facts, not directed toward any particular use.

- **Applied research** is original investigation to acquire new knowledge directed primarily towards a specific practical aim or objective.

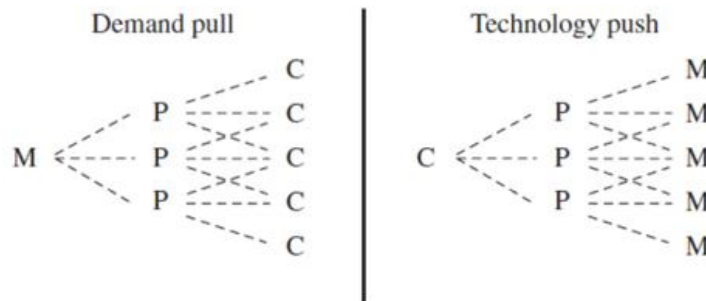
- **Experimental development** is systematic effort, based on existing knowledge from research or practical experience, directed toward creating novel or improved materials, products, devices, processes, systems, or services.

- Creativity: the 'process' or 'activity' (most of the time, quite long and painful), while invention is the 'result' (that can be described on a paper).

Types of Innovation

- **“A product innovation** is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses”
 - Product innovation introduces products or increases ‘quality’
- **“A process innovation** focuses on the innovation of facilities, skills and technologies used for the production and delivering of products and services.”
 - Process innovation decreases the cost of production
- **An organisational innovation** is the implementation of a new organisational method in the firm’s business practices, workplace organisation or external relations.
- **A marketing innovation** is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.
 - We will focus on this but through a different lens.
- **Entrepreneurship** is the creation of a new enterprise that serves society and makes a change
- **Entrepreneurs** are people who identify and pursue solutions among problems, possibilities among needs, and opportunities among challenges.
 - Is a coffee shop an entrepreneurial activity?

- Opportunities can develop from market demand or from new technological possibilities.
- These opportunities are “demand (market) pull” and “technology push” respectively:



M = Market need; P = Product (or service); C = Technological capability

56

- **Strategy:** a commitment to a set of coherent, mutually reinforcing policies or behaviors aimed at achieving a specific competitive goal

→How does it translate to innovation?



- Finally, how will it fit with the overall business strategy?
- For intuition, we only focus on strategic analysis.

- Tesla, Amazon

Aligned to market key success.

First mover advantage

So: Radical Innovations

- Microsoft

Volatile markets

Minimizing risk

2nd mover advantage

So: semi-radical of incremental innovation

- Examples?

Not the resources or capabilities available for innovation

Market follower

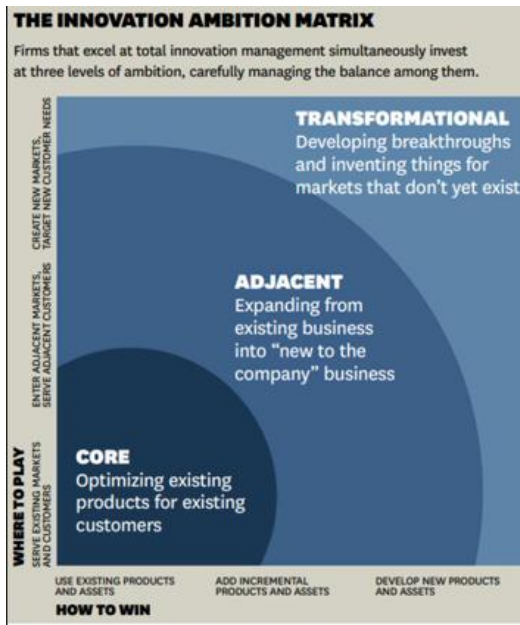
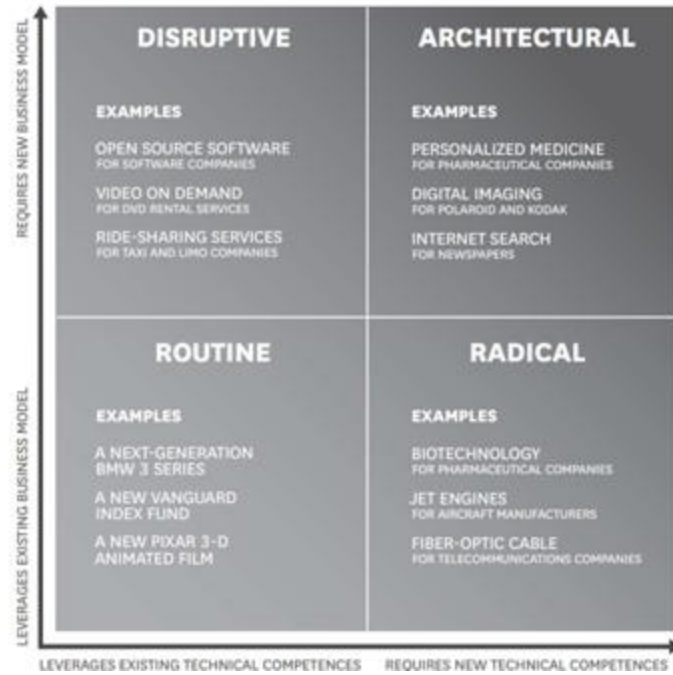
So: don't innovate

What Innovation?

Dimensions:

Existing or new technological competencies

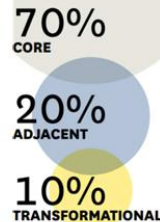
Existing or new business model



IS THERE A GOLDEN RATIO?

Analysis reveals that the allocation of resources shown below correlates with meaningfully higher share price performance. For most companies, this breakdown is a good starting point for discussion.

How much we invest:



HOW INNOVATION PAYS THE BILLS

Among high performers that invest in all three levels of innovation, we find the following distribution of total returns. As it happens, this ratio is the inverse of the resource allocation ratio we discovered in high-performing companies.

How much we get in return:

