	What is the business opportunity	Who is the person	Why did it suceed or fail?
Soligen (S)	Need to cast real parts from ceramic molds, current lost wax with stereolithography is not feasible Building machines that will be sold Many shortimging wih current process	Yehorman Uziel: VP of engineering of 3D systems. Expert in manufacutirng of capital equipment. Had already developed the stero lithography machine knew th eneed -- developed a lost plastic method	Had to develop from scratch/ Large market (20B) Someone who knew what it meant to develop a product Closer to real parts – fewer steps Eleminates pattern making
3D orthopedic (F)	Provide printed "parts" for the human body. Don't need to hand carve	Stephen Campell: Academic, research, doctor Expert in proodontics Knew what services were available and their problems	How to get this to work Issues of FDA – question about ability to get through the system May not have had credibility, does not have experience with FDA or product development Many outstanding issues of biology, binder, material etc.
Therics (S)	Building "pills" that are time release Benefit from not having to validate the process as well as the prototype	Walter Flamebaum: academic, entrp and pharmicology executive Understood technololgy development Understood the market need for pills Understood the FDA process	Huge market (9Billion) Many FDA issues (same as above) Gaining benefit from not having to validate two sets if processes FDA binder going through vapor phase – do the same chem prop. exist?
Z Corp (S)	Building low cost models that are "views" Nontoxic Fast Small Low dcost	Jim Bredt Tim Anderson: MIT folks who had an interest in making surface models Built it in their garage Marine Hastopoulous and Walter - Built the model themselves for arch. Knew business	Had a prototype working Had a team of people who had business sense as well as technical expertise Good market placement (not competing against other markets) – many unadressed needs
3D partners (F)	Concept models for architecture Providing a service firm	Andrew Kelly – MS student Friend in 3DP lab who had some arch. experience	Small market Doesn't know the architectural market

3D imaging (??)	Supply 3D models to doctors Benefit from better visualization Printing in multiple colors	Ted Jackson – 3DP Phd Student Lau Christianson – MBA with healtchare and pharmo-economics	Outsourcing machine (could buy a soligen or Z corp machine) Idea is appropriable – very little cost to set up competiton
Conference (F)	Supply “busts” of people at the mall	Michael Padnos – translational and conference systems No engineering or marketing background	Already done Small market Failed
Specific Surfaces (S)	Trying to build filters from ceramics (need hot and small filters) Need highly designed filters	Mark Parish – ceramics exepert Andrew Jeffrey – Filter expert	Using the soligen machine 800 M per year

Current system:

Very basic – not developed
Emphasis on precision, single material
Not fast, not multiple materials
J&J have dibs on any medical application

Adverse Selection: In moral hazard, we considered the problem of parties to a contract being unable to verify the relevant behavior of another party. Adverse selection concerns a different issue: the inability to verify a relevant characteristic of the other party, one that that party is unable to change (or at least, unable to change quickly). http://econweb.sscnet.ucla.edu/luk/ec160/advsel.htm

Moral hazard: People often lack important information about other's actions. A principal contracts with an agent to provide a good or service. Moral hazard occurs when the agent has no incentive to act in the best interest of the principal and the principal can not observe the actions of the agent.

Credible Commitments: You need to make it believable that you will follow through on the commitment that you have made. In entreprenurship, this can include leaving a job, making your own financial commitment. Etc.

Social Capital: The notion of "social capital" was first introduced by the sociologist James Coleman in 1988. He defined it as "the ability of people to work together for common purposes in groups and organizations". It is argued that a group with members that trust each other can accomplish more economic growth than a similar group without trust. In this way, Coleman has suggested that social capital is a new production factor which must be added to the conventional concepts of human and physical capital.
Trust: Confidence in or reliance on some quality or attribute of a person or thing, or the truth of a statement. (OED).

Appropriablity: Ability to take your idea/ compete with you.

Complimentary synergies: Both groups gain benefit from the synergies between the organizations.

Transaction costs: When dealing with outside groups, there is a cost of information/goods exchange. The ability to minimize transaction costs is termed the efficiency.

Risk: Cost & probability of not having the ideal outcome occur.

Uncertainty: Not knowing the outcome.

pportunities	Individuals	Resources	What are the risks in a new organization

pportunities come from ymmetry: No two individuals ıve the same information
Resources laying fallow
Better way of doing a job
Resources that will become scarce
Technology breakthrough
Existence of a critical need
 	
ɔurces of opportunity (talk about her companies)
Inefficiencies in the market
Changes in social demographic and economic forces
New inventions
	Need to have the right individual who has
	• The idea
	• Ability to see opportunity
	• Desire to take the risk
	• Ability to convince others of the importance
	
	Risk:
	• All people see risk differently
	• Perceive downside differently than the upside
	• People are loss adverse even when the upside is greater than downside
	• Can offset risk differently
	  • Insurance
	  • Diversification
		Can't do the work alone need external resources:
		• Suppliers
		• VC – Business angles
		• Other people that you need to hire
		• Technology source (TLO)
		
		Barriers:
		• Moral hazard
		• Opportunism
		• Adverse Selection
		
		Methods to overcome barriers
		• Credible commitments
		• Social Capital
		• Trust (what are the economics of trust)
		• Ability to enforce commitments
		• Staged investments
		
		Various modes of organizations:
		• New firm
		• Franchise/license
		• Joint venture
		• Contract
		
		What determines mode:
		• Transaction costs
		• Risk reduction
		• Competitive positioning
		• Complementary synergies
		• Performance
		• **Cost**
		• **Speed**
		• **Appropriability**
			Opportunities are rarely in a neat package
			
			How do you overcome the issues of information asymmetry?
			• Educate the customer
			• Educate your resources
			
			Once the information is more symmetric, how do you keep competitive edge:
			• Monopoly – patents
			• Head start
			• Inability of others