



# Successful Exits:

It's not just about the technology

Project Management Institute

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# Objectives

- Appreciate the role technology plays in exiting life sciences companies
- Learn techniques to value the market contribution of technology
- Learn key focus areas to help guide a successful exit by managing processes in highly leveraged activities

# Agenda

1. Technology is a constant – it's the ante
2. Three tools to align technology with exit
  - Disease state fact book
  - Healthcare flow chart
  - Macro/micro maps
3. Align processes for exit
  - Get the big picture
  - Product management
  - Sales management

# My exits

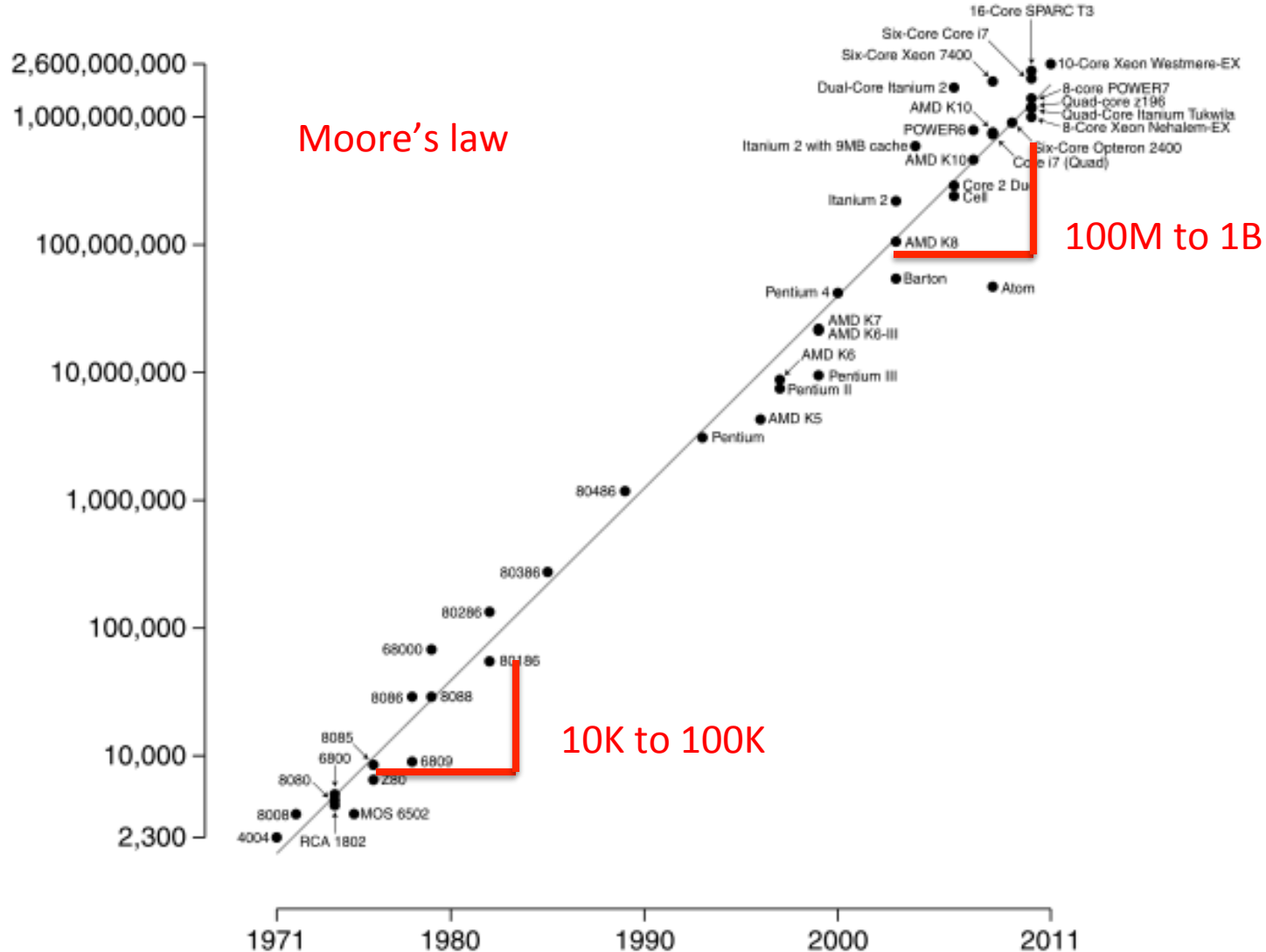
Target



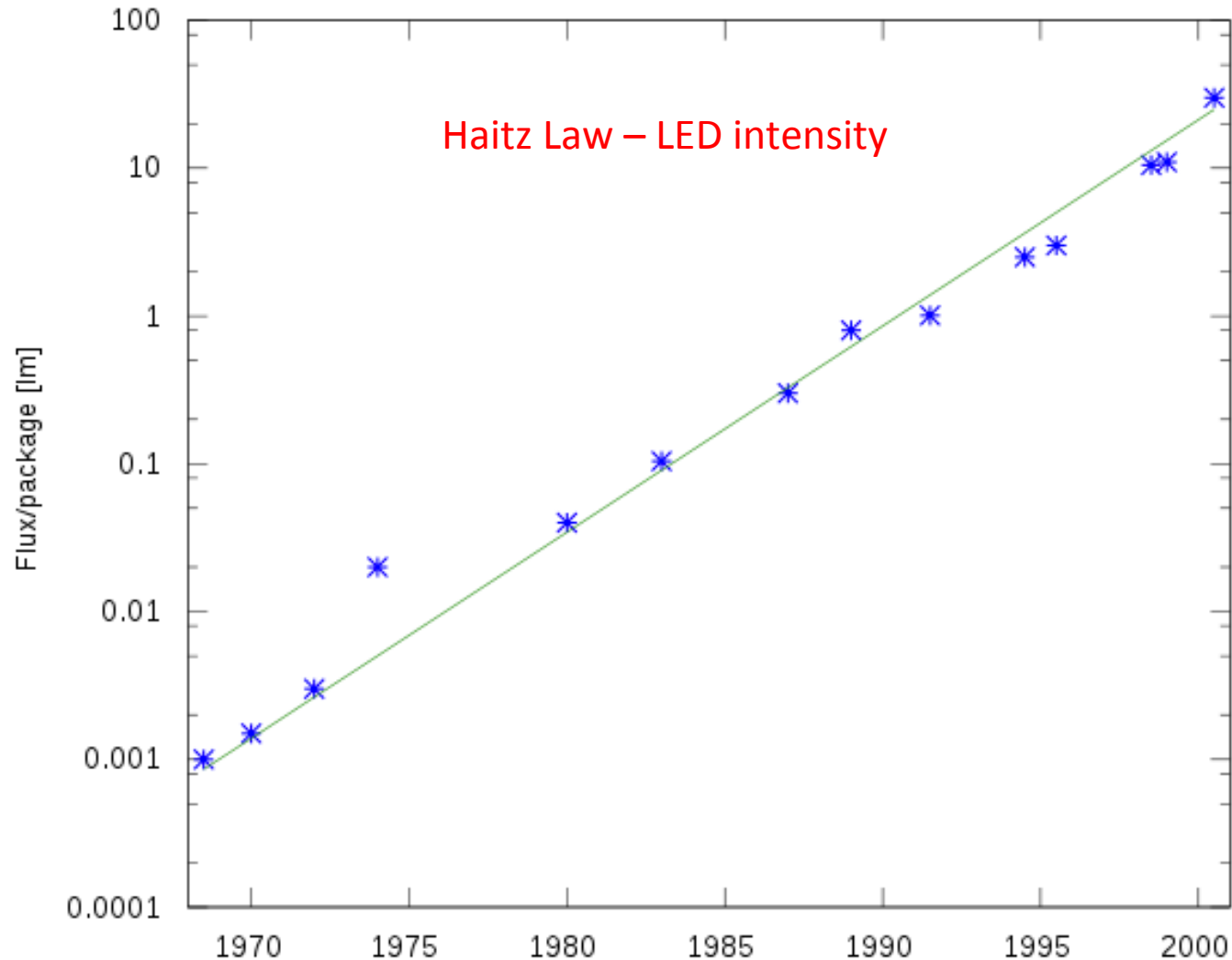
Acquirer



# Is it the technology? – Part 1



# Is it the technology? – Part 2

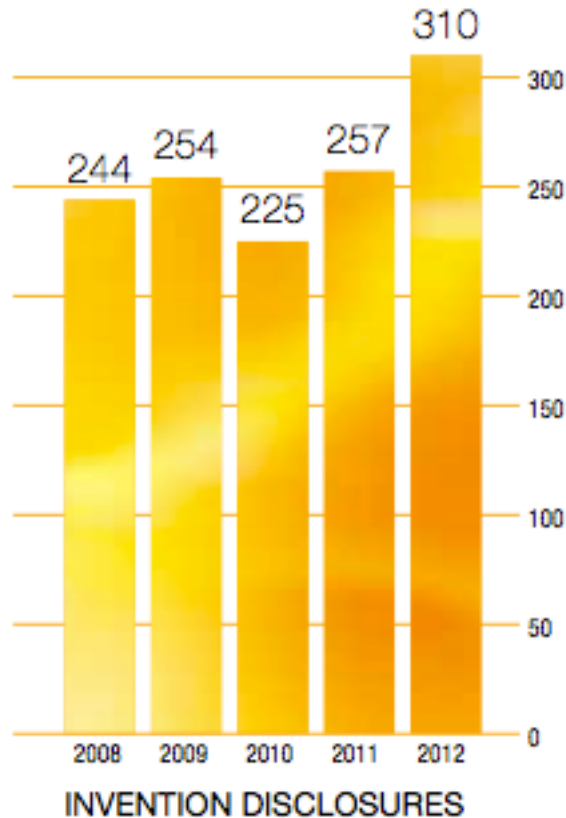


# Is it the technology? – Part 3

Larisa Latynina



# Technology is the ante

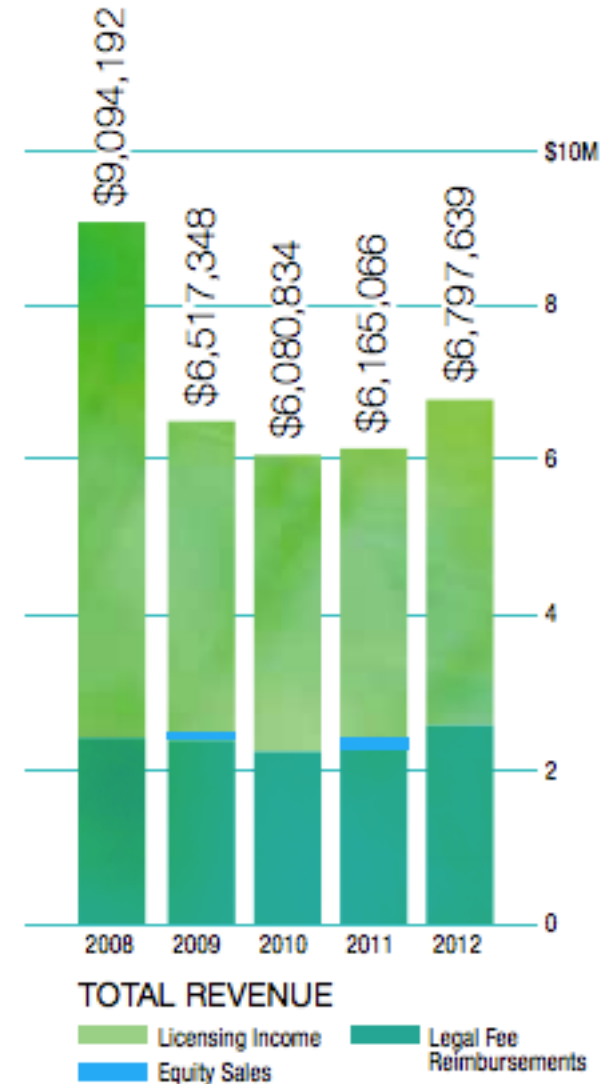


**\$780**  
MILLION IN TOTAL RESEARCH EXPENDITURES IN 2012

**9 → 89**  
IN 2012 SINCE 1996

**NEW START-UP COMPANIES FORMED**

Since 1996, OTM has facilitated the launch of 89 start-up companies around Pitt innovations—a great success in perhaps the most challenging aspect of Pitt's commercialization endeavors.





# Technology de-risks failure, not an exit

- Great technology is a frequent initiator of a life sciences startup company yet it is often not enough to ensure a successful exit.
- Startups must follow the norms of their startup vertical and align customer, investor and acquirer purchase triggers.

# Investment must be connected to exit

- **Disease State Fact Book:** Distinguish the difference between an incremental market improvement and a monumental innovation.
- **Health Care Flow Chart:** Overview of the U.S. Healthcare System. The intention of the overview is to assist the investor in understanding where the product fits within the system.
- **Macro/Micro Maps:** Models to determine the ability to access the market.

# Innovation introduces something new to affect change

- From a business perspective, a marketing specialist would state the desired effect of innovation is either:
  - create a new, differentiated and/or protectable market category, or
  - collapse the value steps in an existing category, resulting in decreased cost or increased benefit

# Innovation introduces something new to affect change

- From a business perspective, a marketing specialist would state the desired effect of innovation is either:
  - create a new, differentiated and protectable market category, or
  - collapse the value steps in an existing category, resulting in decreased cost or increased benefit

# Determine if a technology is an innovation or a modification

- Disease State Fact Book:** distinguish the difference between an incremental market improvement and a monumental innovation.

DISEASE STATE FACT BOOK							
Row #		Base Year	Year 2				
1	Disease Prevalence	Portion of the population found to have the condition (1 in 1000)	24,652,555	25,268,869			
2	Incidence %	Percentage of new cases (generally a year)	20%				
3	Incidence	Occurrence of new cases since last time period later year or in a period of time (generally a year)	5,053,774				
4	Percentage Recurring	Percentage of population with a reoccurring event in a given year	20%				
5	Prevalence Population	[Disease prevalence less incidence] x percentage recurring	4,043,019				
6	Number Diagnosed	Number diagnosed patients (the act of identifying treatable disease)	9,096,793				
7	Diagnosis Rate %	Number diagnosed/disease prevalence (this included incident patients)	36.0%				
8	Procedural Approaches	Diagnostic, Medical Devices, Pharmaceutical, Long-term Care, Rehabilitation, etc.	Medical Therapy	CABG	Intentional Procedure		
9	Procedure/Service Approach %	The percent of diagnosed cases that would use this product/service	84.5%	3.5%	12.3%		
10	Number of Procedures/Services	Number of diagnosed x procedure/service approach %	7,687,700	318,388	1,119,815		
11	Type of Products/Sub-services	List the individual products or services performed			Stent	Guide Catheter	Guide Wire
12	Units per Procedure/Service	Example: 2 Stents per Procedure, 30 pills per cycle, 30 days in long-term care			2.2	1.75	1.1
13	Market Units/Services	Number of Procedures x Units per Procedure/Service			2,463,593	1,959,677	1,231,797
14	Average Revenue per Event	Revenue value per event or service - note revenue by manufacturer would be different than at the hospital level			\$ 550.00	\$ 9.87	\$ 6.93
15	Market Dollars or Cost	Market Units x Average Price			\$1,354,976,390	\$ 19,342,008	\$ 8,536,351

# Factors that increase market value

Disease Prevalence	Portion of the population found to have the condition (1 in 1000)
Incidence %	Percentage of new cases (generally a year)
Incidence	Occurrence of new cases since last time period — later year or in a period of time (generally a year)
Percentage Recurring	Percentage of population with a recurring event in a given year.
Prevalence Population	[Disease prevalence less incidence] x percentage recurring
Number Diagnosed	Number diagnosed patients (the act of identifying treatable disease)
Diagnosis Rate %	Number diagnosed/disease prevalence (includes incident patients)
Procedural Approaches	Diagnostic, Medical Devices, Pharmaceutical, Long-Term Care, Rehabilitation, etc.
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Average Revenue per Event	Revenue value per event or service – note revenue by manufacturer would be different than at the hospital level
Market Dollars or Cost	Market Units x Average Price

# 4% pt. change in diagnosis rate can increase the market by 11%

## DISEASE STATE FACT BOOK

Row #	Year 1			Year 2			
1	Disease Prevalence	25,268,869		25,268,869			
2	Incidence %	20%		20%			
3	Incidence	5,053,774		5,053,774			
4	Percentage Recurring	20%	5%	25%			
5	Prevalence Population	4,043,019		5,053,774			
6	Number Diagnosed	9,096,793		10,107,548			
7	Diagnosis Rate %	36.0%	4%	40.0%			
8	Procedural Approaches	Medical Therapy	CABG	Inteventional Procedure			
9	Procedure/Service Approach %	84.5%	3.5%	12.3%			
10	Number of Procedures/Services	7,687,700	318,388	1,119,815			
11	Type of Products/Sub-services	Stent			Guide Catheter		Guide Wire
12	Units per Procedure/Service	2.2			1.75		1.1
13	Market Units/Services	2,463,593			1,959,677		1,231,797
14	Average Revenue per Event	\$ 550.00	\$ 9.87	\$ 6.93			
15	Market Dollars or Cost	\$1,354,976,390	\$ 19,342,008	\$ 8,536,351			
		1,382,854,750			1,536,505,277		
					153,650,528		

# 4% pt. increase in diagnosis rate

6	<b>Number Diagnosed</b>	9,096,793		
7	<b>Diagnosis Rate %</b>	36%		
8	<b>Procedural Approaches</b>	Medical Therapy	CABG	Interventional Procedure
9	<b>Procedure/Service Approach %</b>	84.5%	3.5%	12.3%
10	<b>Number of Procedures/Services</b>	7,687,700	318,388	1,119,815
11	<b>Types of Products/Sub-Services</b>		Stent	Guide Catheter
12	<b>Units per Procedure/Service</b>		2.2	1.75
13	<b>Market Units/Service</b>		2,463,593	1,959,677
14	<b>Average Revenue per Event</b>		\$550.00	\$9.87
15	<b>Market Dollars or Cost</b>		\$1,354,976,390	\$19,342,008
			\$1,382,854,750	

4% increase

		10,107,548		
	<b>Diagnosis Rate %</b>	40%		
	<b>Procedural Approaches</b>	Medical Therapy	CABG	Interventional Procedure
	<b>Procedure/Service Approach %</b>	84.5%	3.5%	12.3%
	<b>Number of Procedures/Services</b>	8,541,888	353,764	1,244,239
	<b>Types of Products/Sub-Services</b>		Stent	Guide Catheter
	<b>Units per Procedure/Service</b>		2.2	1.75
	<b>Market Units/Service</b>		2,737,326	2,177,418
	<b>Average Revenue per Event</b>		\$550.00	\$9.87
	<b>Market Dollars or Cost</b>		\$1,505,529,323	\$21,491,120
			\$1,536,505,278	

\$153,650,528



# 1.2% pt. procedural shift can change the market dollars by 10%

## DISEASE STATE FACT BOOK

Row #	Year 1			Year 2			
1	Disease Prevalence	25,268,869		25,268,869			
2	Incidence %	20%		20%			
3	Incidence	5,053,774		5,053,774			
4	Percentage Recurring	20%		20%			
5	Prevalence Population	4,043,019		4,043,019			
6	Number Diagnosed	9,096,793		9,096,793			
7	Diagnosis Rate %	36.0%		36.0%			
8	Procedural Approaches	Medical Therapy	CABG	Inteventional Procedure	Medical Therapy	CABG	Inteventional Procedure
9	Procedure/Service Approach %	84.5%	3.5%	12.3%	84.5%	2.0%	13.5%
10	Number of Procedures/Services	7,687,700	318,388	1,119,815	7,687,700	181,936	1,227,157
11	Type of Products/Sub-services	Stent	Guide Catheter	Guide Wire	Stent	Guide Catheter	Guide Wire
12	Units per Procedure/Service	2.2	1.75	1.1	2.2	1.75	1.1
13	Market Units/Services	2,463,593	1,959,677	1,231,797	2,699,746	2,147,525	1,349,873
14	Average Revenue per Event	\$ 550.00	\$ 9.87	\$ 6.93	\$ 550.00	\$ 9.87	\$ 6.93
15	Market Dollars or Cost	\$1,354,976,390	\$ 19,342,008	\$ 8,536,351	\$1,484,860,398	\$ 21,196,075	\$ 9,354,621
		1,382,854,750			1,515,411,094		
					132,556,345		

# Increasing units per procedure by .2 units shift market dollars by 9%

## DISEASE STATE FACT BOOK

Row #	Year 1			Year 2		
1	Disease Prevalence	25,268,869		25,268,869		
2	Incidence %	20%		20%		
3	Incidence	5,053,774		5,053,774		
4	Percentage Recurring	20%		20%		
5	Prevalance Population	4,043,019		4,043,019		
6	Number Diagnosed	9,096,793		9,096,793		
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14	Average Revenue per Event			\$ 550.00	\$ 9.87	\$ 6.93
15	Market Dollars or Cost			\$ 1,354,976,390	\$ 19,342,008	\$ 8,536,351
				1,382,854,750		
				123,179,672		
				1,506,034,421		

Geography: U.S.

Disease: Coronary Artery Disease

**Startup Company, INC.**  
**UNITS SALES & MARKET SHARE**  
**MARKET: Stents**

## I. Your Company A Net Sales

	Gross Profit %	Units	Annual Inc. %	Sales	Annual Inc. %	ASP	Annual Inc. %
Yr # 1		2,217,234		\$1,462,758,344		\$ 659.72	
Yr # 2	0.680	2,408,162	8.6%	\$1,456,938,105	-0.4%	\$605.00	-8.3%
Yr # 3	0.695	2,833,132	17.6%	\$1,679,763,933	15.3%	\$592.90	-2.0%
Yr # 4	0.710	3,320,077	17.2%	\$1,929,103,892	14.8%	\$581.04	-2.0%
Yr # 5	0.720	3,873,423	16.7%	\$2,205,608,783	14.3%	\$569.42	-2.0%
Yr # 6	0.720	4,495,937	16.1%	\$2,508,879,991	13.8%	\$558.03	-2.0%

## II. Estimated Share of Market Potential

### UNITS

	<u>Total Market</u>		<u>Share of Market</u>						
	Units	Annual Inc. %	Company A	Company B	Company C	Company D	Company E	All Others	Total
Yr # 1	2,463,593		90.0%	5.0%	5.0%	0.0%	0.0%	0.0%	100.0%
Yr # 2	2,833,132	13.00%	85.0%	5.0%	5.0%	5.0%	0.0%	0.0%	100.0%
Yr # 3	3,541,415	25.00%	80.0%	6.0%	6.0%	5.0%	3.0%	0.0%	100.0%
Yr # 4	4,426,769	25.00%	75.0%	9.0%	7.0%	5.0%	3.0%	1.0%	100.0%
Yr # 5	5,533,461	25.00%	70.0%	10.0%	8.0%	6.0%	3.0%	1.0%	98.0%
Yr # 6	6,916,826	25.00%	65.0%	14.0%	9.0%	7.0%	4.0%	1.0%	100.0%

### Dollars

	<u>Total Market</u>		<u>Share of Market</u>						
Mkt ASP	Dollars (000)	Annual Inc. %	Company A	Company B	Company C	Company D	Company E	All Others	Total
\$625 Yr # 1	\$1,539,745,625		95.0%	5.0%	0.0%	0.0%	0.0%	0.0%	100.0%
\$550 Yr # 2	\$1,558,222,573	15.00%	93.5%	4.0%	2.5%	0.0%	0.0%	0.0%	100.0%
\$539 Yr # 3	\$1,908,822,651	22.50%	88.0%	5.0%	5.0%	2.0%	0.0%	0.0%	100.0%
\$528 Yr # 4	\$2,338,307,748	22.50%	82.5%	7.0%	6.0%	2.0%	1.5%	1.0%	100.0%
\$518 Yr # 5	\$2,864,426,991	22.50%	77.0%	9.0%	7.0%	4.0%	2.0%	1.0%	100.0%
\$507 Yr # 6	\$3,508,923,064	22.50%	71.5%	12.0%	8.0%	5.5%	2.0%	1.0%	100.0%

# Market factors that attract acquirers

## Factors that increase market value:

(A rising tide lifts all boats)

- Diagnosis rate
- Procedure rate
- Units p/ procedure

## Factors that require taking share:

(fighting incumbents)

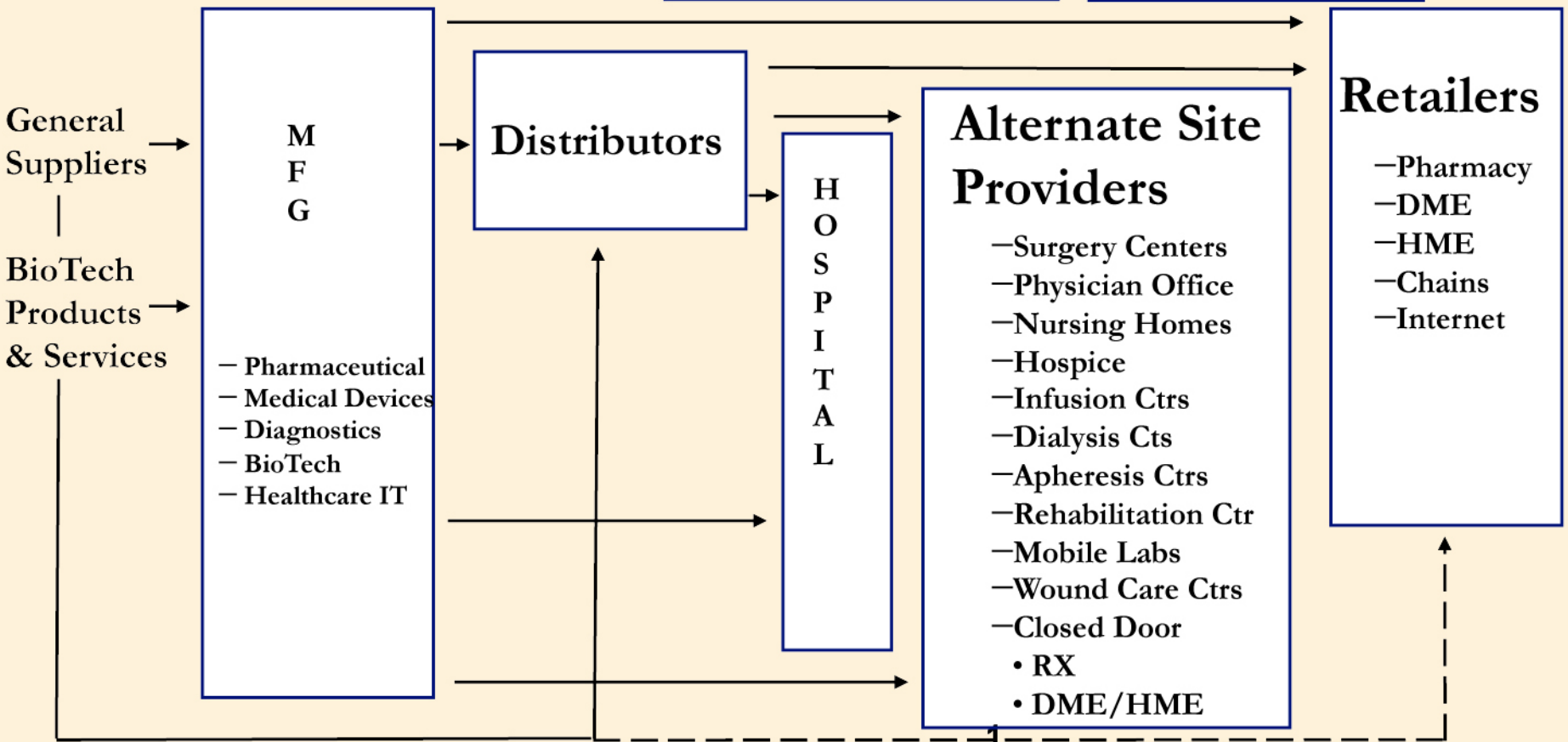
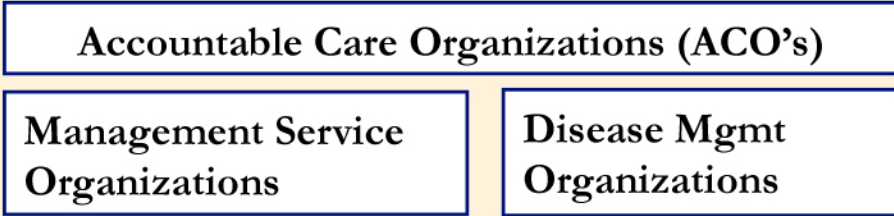
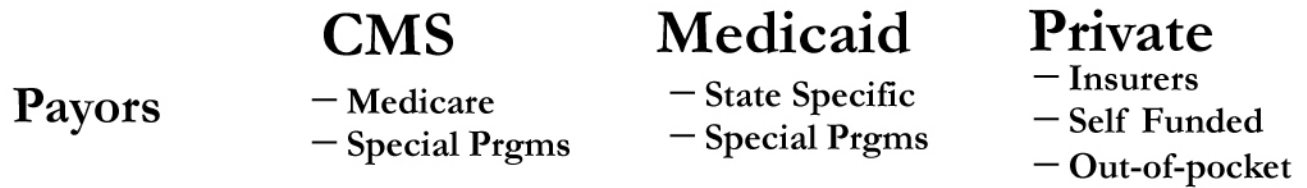
- Type of products
  - Category transitions
- Market units
- Average selling price
- Market dollars

# Innovation introduces something new to affect change

- From a business perspective, a marketing specialist would state the desired effect of innovation is either:
  - create a new, differentiated and protectable market category,
  - or
  - collapse the value steps in an existing category, resulting in decreased cost or increased benefit

# \$ 2.8 T

17.9% of 2012 GDP



# Medical Device Industry Macro Map

## HOSPITALS

	Operating Room													Multi specialty					ICU/ CCU	Laboratory based				Specialty								
	cardiothoracic general	colon rectal	otolaryngology	orthopedic	plastic surgery	ophthalmology	ob-gyn	general laparoscopy	general-other	Vascular	urology	endoscopy	neurology	Robot assisted / Image guided	anesthetics	respiratory devices	hemostats	tissue sealants	adhesion prevention	monitoring systems		Interventional cardiology	Interventional radiology	Electrophysiology	Interventional neurology	CRM	Radiology(imaging)	Renal	Neurology	Infusion systems	wound care and management	
Abbott	✓					✓																✓	✓									✓
Atrium	✓							✓														✓	✓									
B Braun															✓							✓	✓						✓	✓	✓	✓
Baxter	.														✓		✓	✓	✓									✓	✓	✓	✓	
Boston Scientific		✓				✓		✓	.	✓	✓	✓	✓	.								✓	✓		✓	✓	.			✓	✓	
CR Bard			✓	✓				✓	✓	✓	✓	✓	✓			✓						✓	✓	✓		✓	.	✓			✓	
Cook	✓	✓				✓		✓	✓	✓	✓	✓										✓	✓	✓						✓	✓	
Covidien	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	.		✓		✓	✓			✓	✓	✓		✓	✓	✓		✓	✓	✓	
Drager	.	.	.			.	.	.	.	.	.	.	.	.	✓	✓					✓	.	.	.	.	.	.	.	.	.	.	.
Gambro	.	.				.	.	.	.	.	.	.	.	.			.	.			.	.	.	.	.	.	.	✓	.	.	.	.
GE Health care			✓	.		✓		✓		✓			✓	✓	✓					✓	.	.	✓		✓	✓					✓	
Gore Medical	✓	✓		✓				✓	✓	✓		✓	.		✓	✓					✓	✓	✓		✓	✓					✓	
J&J	✓			✓	✓	✓	✓	✓	.	✓		✓	.								✓	✓	✓		✓	✓	.		✓	✓	✓	
Kinetic Concepts Inc.						✓					✓																				✓	
Medtronic	✓		✓	✓							✓										✓	✓	.			✓	.		✓	✓		
Philips Health Care	.	.	.												✓					✓	.	.	.	.	.	.	✓	✓	.	.	.	
Siemens Health care	.	.	.												✓	✓				✓	.	.	✓	.	.	✓	.	.	.	.	.	
Smith and Nephew				✓								✓																			✓	
Stryker				✓								✓	✓	✓						✓	✓		.	.		✓	.		✓	✓		
St. Jude	✓	✓											✓								✓				✓	.		✓				
Synergetics												✓										✓			✓	.		✓				
Synovis	✓				✓		✓	✓	✓	✓		✓																				
Unomedical/ Convotech																✓					✓									✓	✓	
Zimmer				✓																						✓						

# Interventional Cardiology Micro Map

	angiography	angioplasty				IVUS	vascular closure	atherectomy	thrombectomy	cardiac catheter
		angioplasty balloon catheters	stents							
			coronary stents	peripheral stents						
			bare metal	drug eluting	peripheral stents	peripheral stent grafts				
Abbott		✓	✓	✓		✓		✓		
Abiomed	✓									✓
Arrow Medical	✓	✓							✓	✓
Arterial Remodeling Technologies			✓							
Ashahi Intecc Co.	✓	✓								✓
Atrium	✓	✓	✓	✓	✓				✓	
B Braun	✓	✓								
Biosensors International		✓	✓	✓						✓
Biotronik		✓	✓		✓					
Boston Scientific	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CR Bard		✓	✓			✓		✓		✓
Cardiovascular Systems Inc.		.	.			.		✓		.
Cardiac output technologies		✓	✓	✓	✓					✓
Cardima										✓
Clear stream technologies		✓	✓	✓	✓	✓				
Cook	✓	✓		✓		✓		✓	✓	
Concentric Medical	.	.		.		.		.	✓	
Covidien				✓	✓			✓		
Edwards Life Sciences	✓	✓			✓	.		.		
Gore Medical						✓		✓		



# What are they thinking...

## Typical academic startup

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- My technology is better
- I'm the thought leader
- I've raised \$XXM NIH
- Salespeople are dispensable
- Marketing shmarketing
- Myopic focus
- Customers are stupid
- Autonomy

## Investors

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- Management Team
- Board of Directors
- Intellectual Property
- Accountability
- Relationships with Industry
- Business Model
- Clear Exit
- No surprises

# Work top-down

## VISION:

Develop and execute innovative and effective strategies, marketing campaigns and sales processes in order to exceed revenue and margin objectives

### MISSION:

Exceed customer expectations by offering:

- Compelling products and services
- Innovative new product & service offerings
- Reliable partnerships in products & services



### Focus Priorities

- Core set of strategic accounts
- Continually invest in value proposition
  - Build customer loyalty
  - Diversify target market

### GOAL 1

Grow 2009 revenue to \$6M

### GOAL 2

Achieve stable, \$500K/month revenue

### GOAL 3

Forge 2 revenue-producing strategic alliances

#### Strat 1:

Target SR-level contacts within accounts

#### Strat 2:

Strategic account plan

#### Strat 3:

Optimize selling process

#### Strat 4:

Grow and refine value proposition with existing panels

#### Strat 5:

Enter high-growth, less competitive markets such as cosmetics

#### Strat 1:

Establish customer loyalty program

#### Strat 2:

Pursue collaborative development deals

#### Strat 3:

Involve strategic customers in R&D

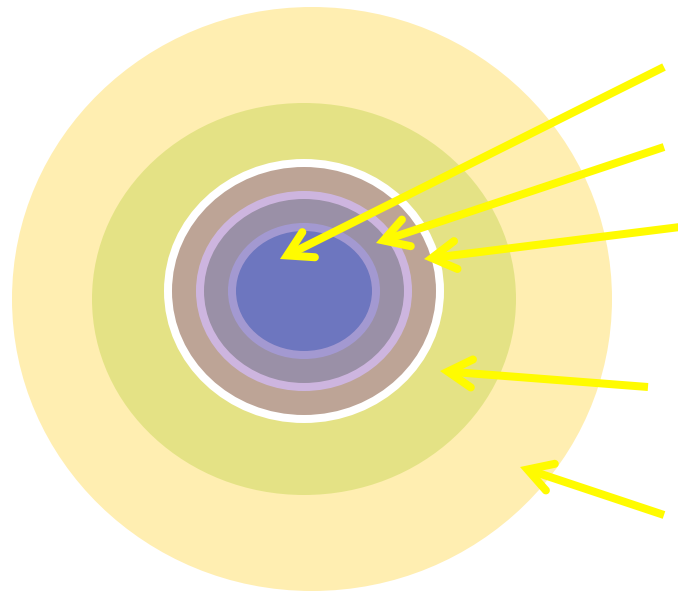
#### Strat 1:

Complement global reagent company's discovery tox offering

#### Strat 2:

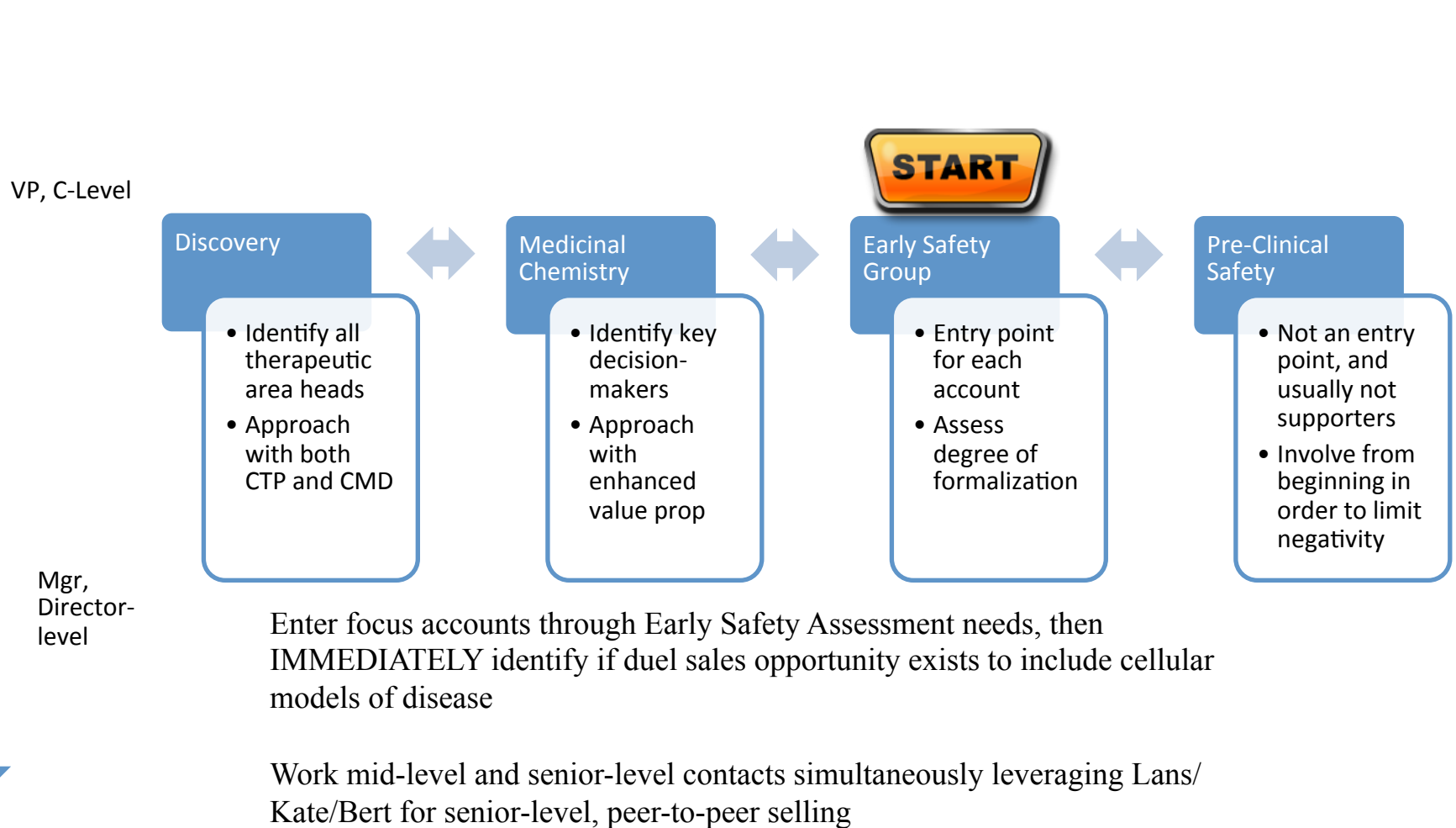
Pursue global contract research organizations

# Core versus Potential Product



- Core Benefit (fundamental value)
  - Reduce costs & bring profitable drugs to market faster
- Basic Product (minimum to delivery core benefit)
  - Toxicity profiling screening services
- Expected Product (attributes customers expect)
  - Relevant panels, classifiers, reports, customer data, agreeable reference library
- Augmented Product (exceed customer expectations)
  - Diverse panels, advanced classifiers, access to reference database, expansive reference database, high-level no false positives
- Potential Product (new ways to satisfy customers)
  - 3D tissue models, human productivity

# Sales Process



# Sales Pipeline Management

## ■ Initiate

- Research account
  - Develop profile
  - Identify collaborators
- Develop contacts
  - Identify senior management
  - Identify scientific advisory board
  - Search conferences for contacts
  - Develop contact profiles
- Formulate 1st contact strategy
  - Identify product focus areas
  - Develop 1st contact communication
- Make initial contact

## ■ Position

- Confirm initial account interest
- Qualify account
  - Identify Critical Business Issue (CBI)
  - Confirm budget amount and cycle
  - Identify procurement process
  - Confirm purchasing authority
  - Identify key contacts
- Provide initial solution statement
  - Develop value prop
  - Compile initial pricing
  - Develop initial solution Statement materials
- Submit initial solution statement materials
- Coordinate presentation
  - Identify attendees
  - Identify presentation goals
  - Develop presentation and materials
  - Schedule presentation
- Perform presentation

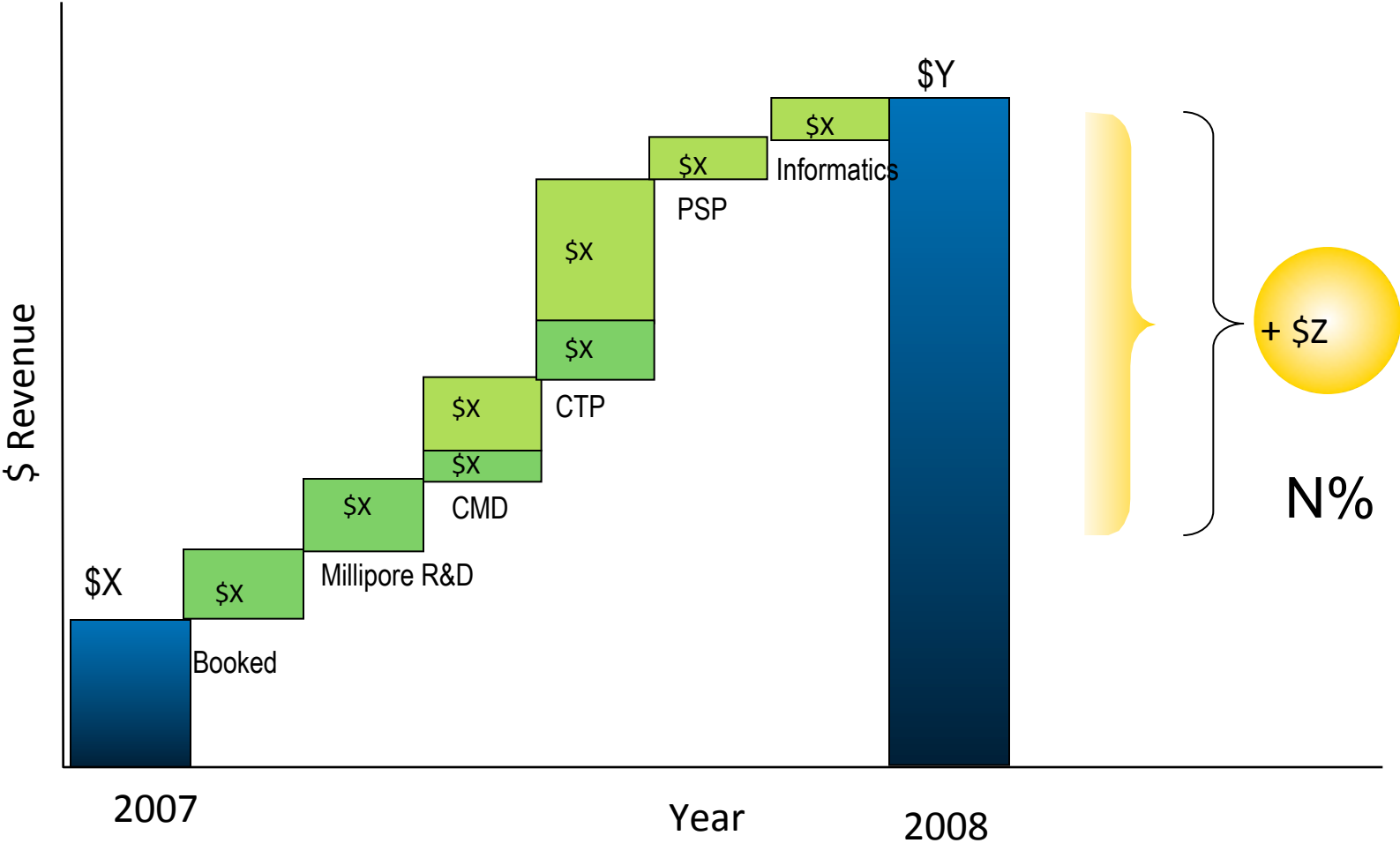
## ■ Procure

- Assemble follow-up information
- Submit follow-up information
- Confirm proposal interest
- Develop proposal & agreements
  - Finalize product & services
  - Finalize pricing (25%)
  - Draft proposal & agreements (25%)
- Submit proposal & agreements
-  Negotiate proposal & agreements (due: 05/24/2008)
- Send final proposal & agreements
- Confirm acceptance

## □ Close

- Coordinate contract receivables
  - Request purchase order (15%)
  - Pursue contract signatures
- Confirm receivables to Cellumen
- Handoff to support/implementation team
- Formal thank you to customer
- Close sales opportunity

# Revenue Walk



# Customers – Phase I

## Phase I: Contract

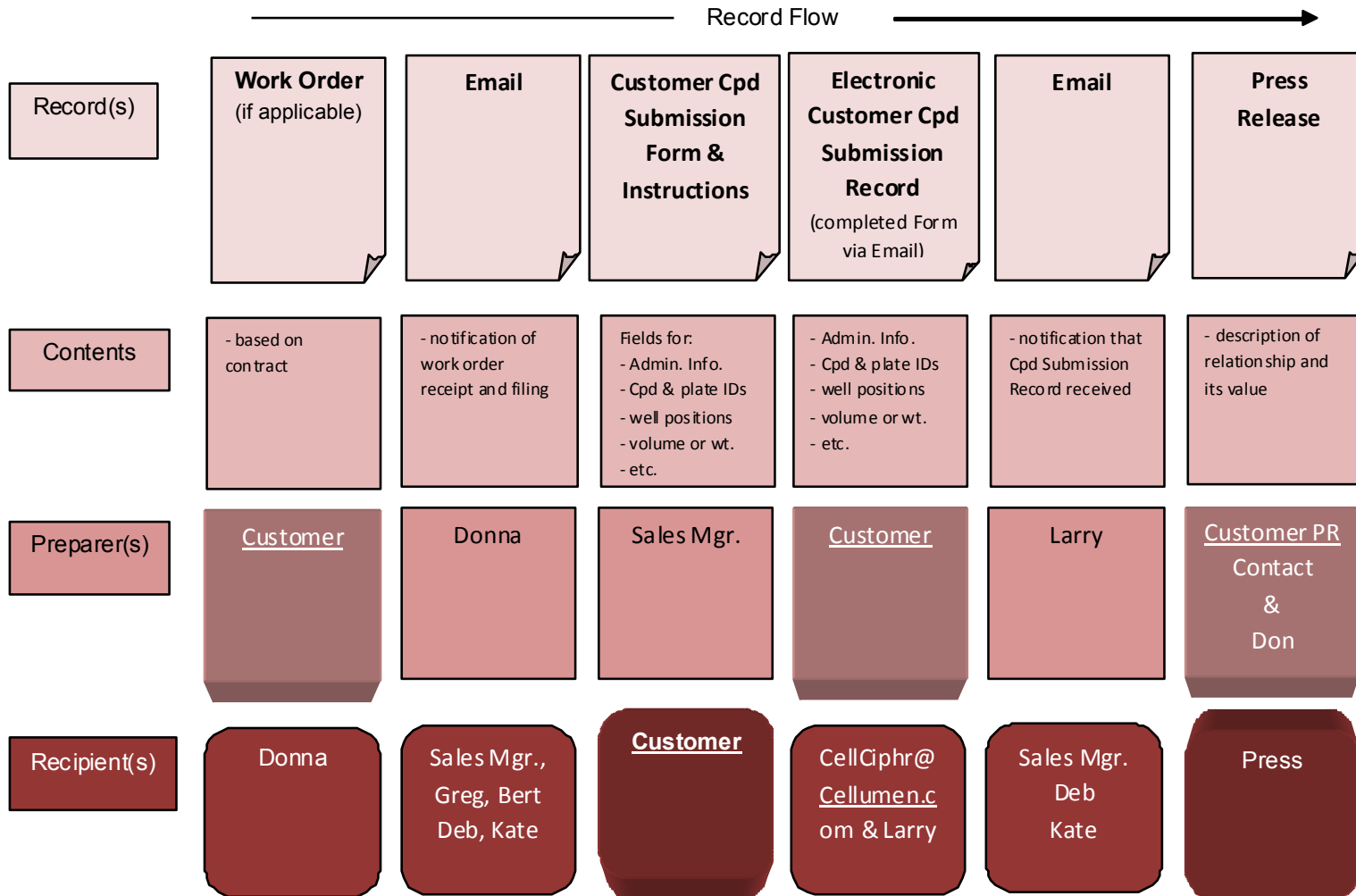
Record Flow



Record(s)	<b>Project Document</b>	<b>Draft Proposal &amp; Quotation</b>	<b>Final Proposal &amp; Quotation</b>	<b>First Draft Contract</b>	<b>Email</b>	<b>Second Draft Contract</b>	<b>Final Contract</b>	<b>Email</b>
Contents	- Compounds - Panel - Scope - Customer intent - Promised results - etc.	- price (model) - proposal - quote	- price - proposal details - quote details	- contract details	- PR contact	- contract details	- contract details	- notification of customer receipt of contract
Preparer(s)	<b>Sales Manager</b>	<b>Don &amp; Sales Manager</b>	<b>Sales Manager</b>	<b>Sales Manager</b>	<b>Sales Manager</b>	<b>Sales Manager</b>	<b>Sales Manager</b>	<b>Donna</b>
Recipient(s)	Bert Deb Kate	Bert Kate Don	<u>Customer</u>	Bert Kate Don	Don	Lans Gregg	<u>Customer</u> & Donna	Sales Mgr, Gregg, Bert, Deb, Kate

# Customers – Phase 2

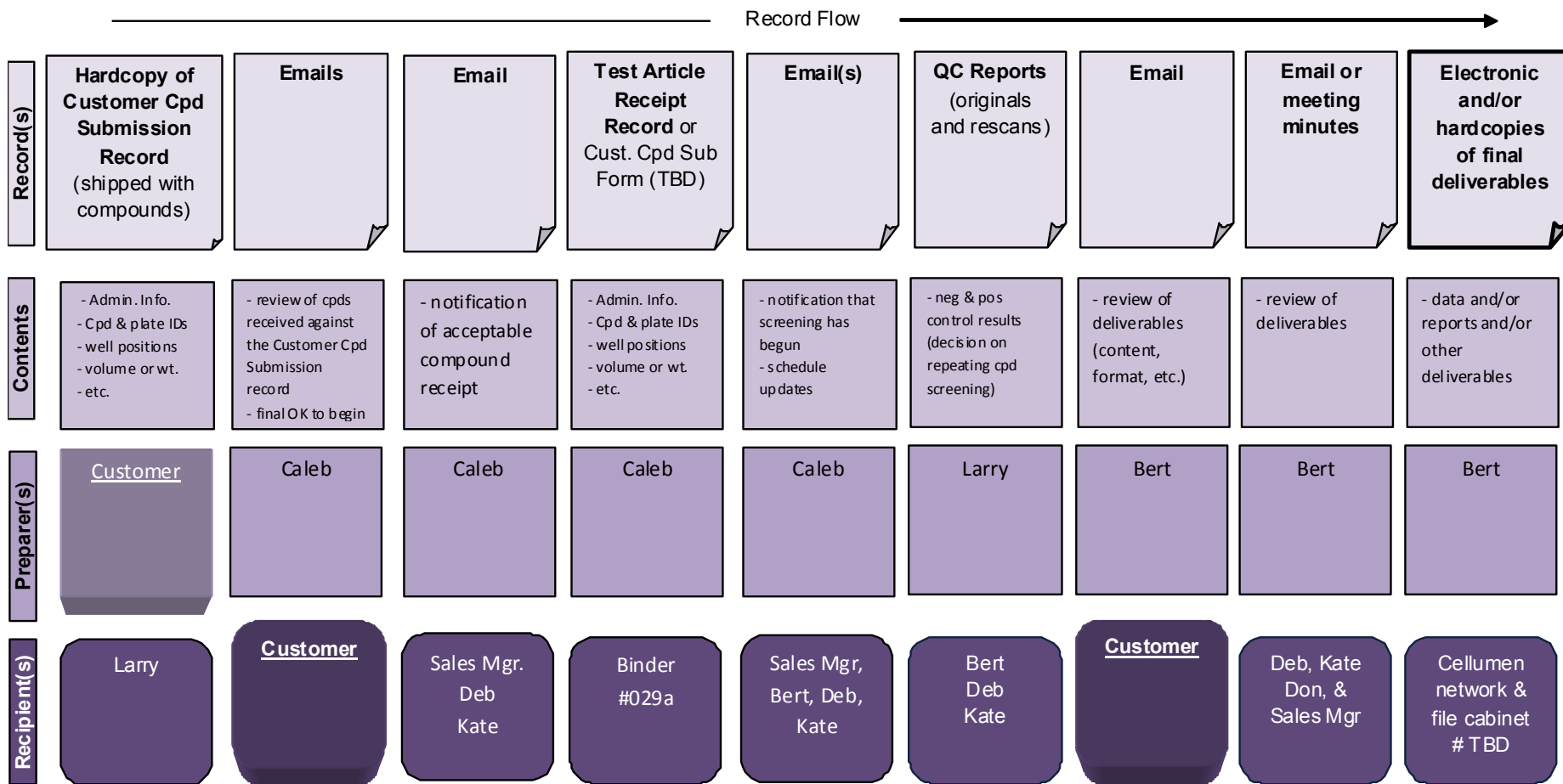
## Phase II: Intermediate Administrative Records





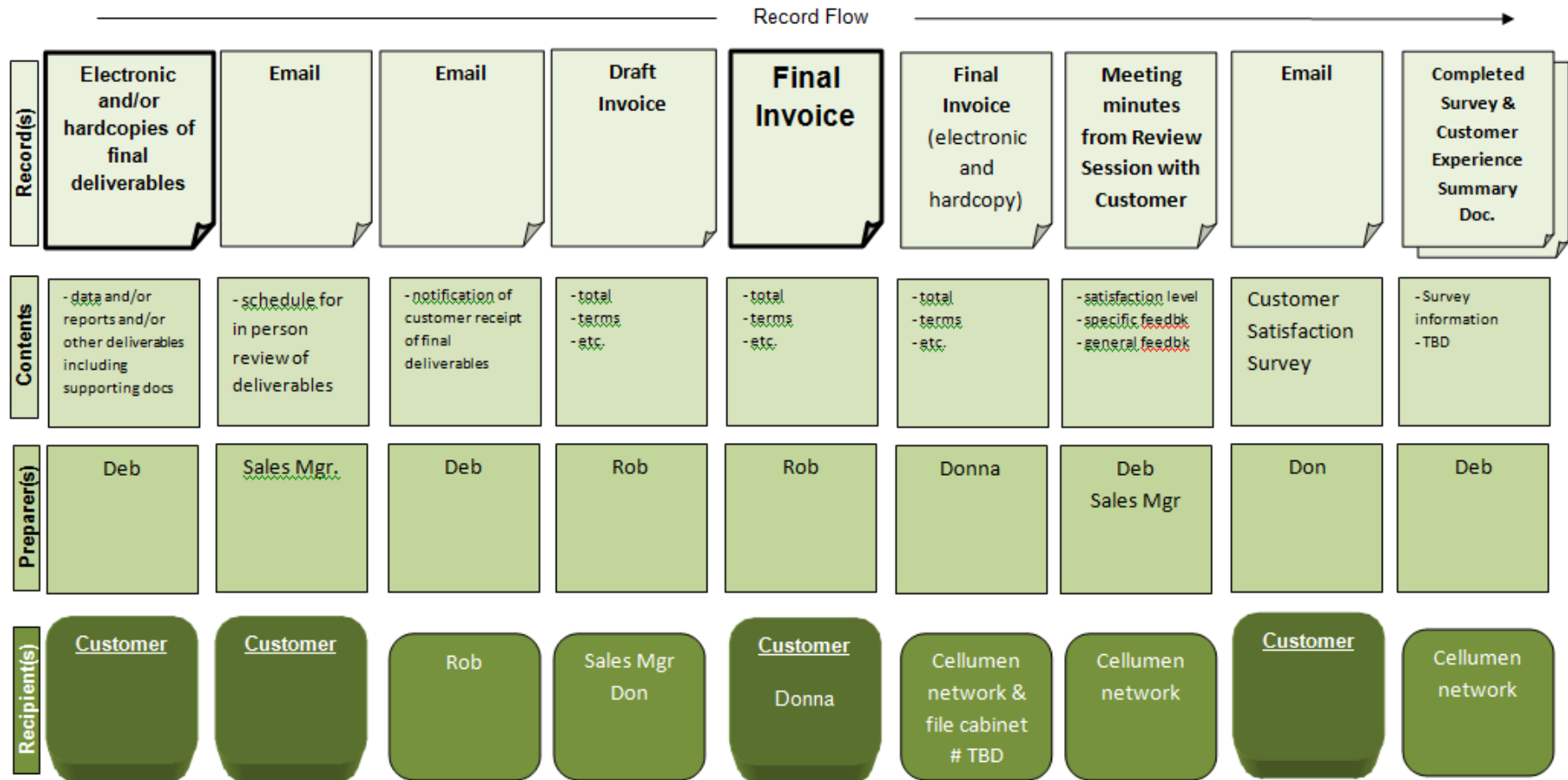
# Customers – Phase 3

## Phase III: Compound Records and Customer Deliverables



# Customers – Phase 4

## Phase IV: Customer Delivery Records, Invoice and Follow up Records



# Conclusion

- Technology de-risks failure, not an exit
- Innovation introduces something new to:
  - create a category
  - collapse the value steps for cost/benefit
- The DSFB identifies market value triggers
- The HCFC identifies the industries value steps
- Market maps determine sales channel access
- Manage process in highly leveraged activities