



Profiting from Innovation
ECMSA Barcelona Feb 2-3, 2006

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Dow Corning

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Focus of Today's Talk

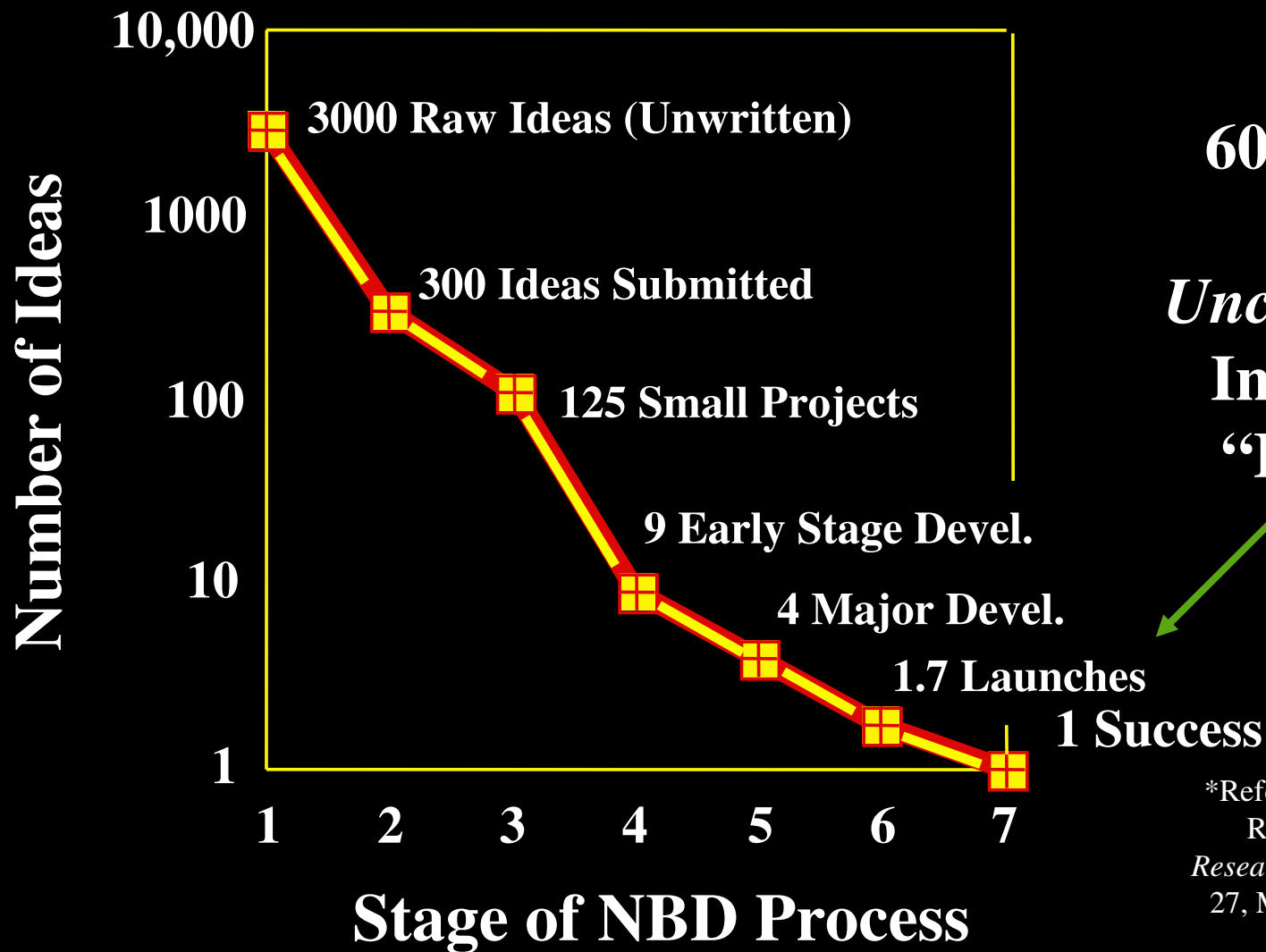
- The Challenge
- Brief introduction to Dow Corning (DC)
- Discuss the drivers of Innovation today
 - Importance of innovation in a global economy
 - Innovation can be applied everywhere
 - Successful Innovation Requires:
 - Applying the Key Elements of innovation
- Examples of Innovation applied in Dow Corning
- Focus mainly on our Construction Industry (Division) CI
- Learnings and Conclusion
- Discussion and Questions

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Innovation: New Business Development (NBD) Analysis Shows Most Industrial Innovation is Unsuccessful*



**60% Success Rate
from Launch
Unchanged in 40 Yrs.
In Spite of All the
“Improvements”**

*Reference: G. Stevens and J. Burley, “3000 Raw Ideas = 1 Commercial Success!” *Research•Technology Management*, 40(3): 16-27, May-June, 1997. Runner-Up, IRI “Best Paper of the Year.”

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“Rule of Thirds”

- ❖ **Unsuccessful** New Business Development efforts tend to fall into 3 categories :
 - 1/3 fail due to constantly moving product targets (= we never really understood & defined the real customer needs!)
 - 1/3 fail when targets are met, but “nobody cares” enough to move ahead (= we did not bring anything of value to the customer!)
 - About 1/3 fail because we don’t have the technology to hit the targets (= we just could not do it!)

Marketing Practices have a key influence on Innovation Success

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Importance of Innovation in a Global Economy

- New Competitors AND Markets
- Profound and rapid globalization:
 - mobility of capital,
 - exchange rate and trade balance pressures,
 - free trade
 - labor shifts to low-cost countries
 - Commoditisation (difficult to differentiate)
- Staggering advances in information technology and scientific breakthroughs

**So, despite the difficulties,
we must Innovate to move to
higher value-added opportunities**

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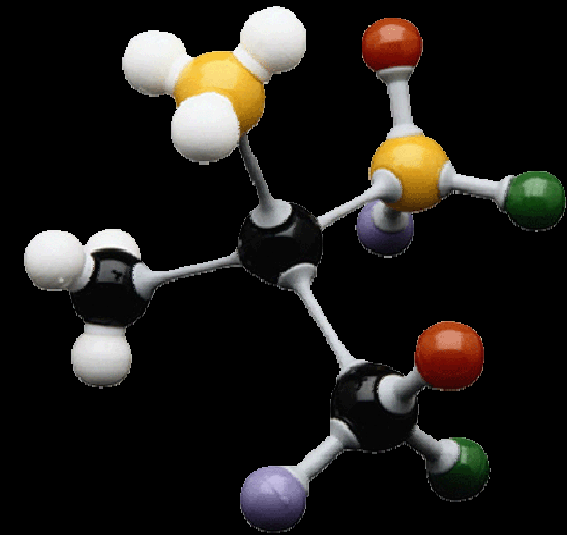
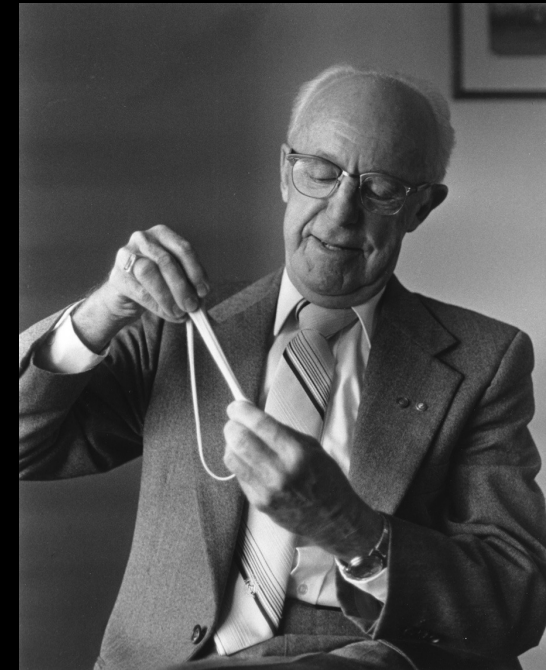
Dow Corning Vision
We are innovative Leaders,
unleashing the power of silicon
to benefit everyone everywhere.

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Dow Corning – the silicon technology pioneer

- A joint venture of The Dow Chemical Company and Corning, Inc.
- Organized to explore the potential of the silicon atom
- 7,000 products and services
- 25,000 customers
- More than 4,000 active patents worldwide
- 6% of sales revenue is reinvested in science and technology annually



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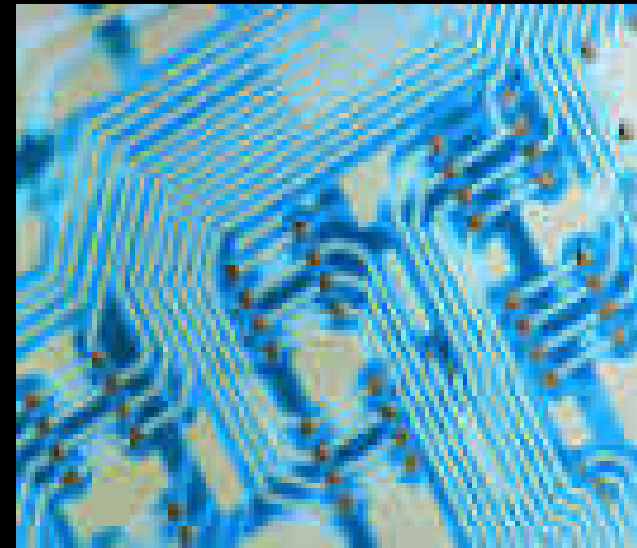
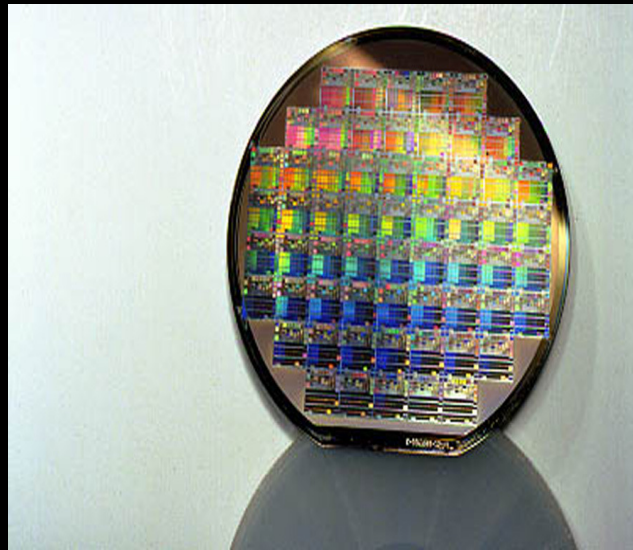


Dow Corning serves customers' diverse needs...

Automotive
Beauty & Personal Care
Compound Semiconductor

Construction

Electronics
Healthcare
Industrial Lubrication
Paints and Inks
Plasma
Pressure Sensitive
Rubber Fabrication
Textile, Leather
Services



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Dow Corning® Brand Construction Products... the Choice for Quality, Performance & Durability



Successful Innovation Requires:

The Right Environment

- Corporate Vision and Priorities (= Business Imperative)
- Performance Expectations and Rewards

The Right Business Strategies

- Clear Business Focus
- Good Business Strategies.

The Right Processes

- Portfolio & Pipeline Management
- “Fuzzy” Front End (FFE)
- Commercialisation (CE)

**Above all the Right People
And the Right Behaviours**

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First Companies and Managers Must Change

From

- Tight, controlling role, micro managing
- Inflexible, hierarchical organizational structure
- Instructions provided to employees
- Selective sharing of information
- Few partnerships
- Focus on traditional customers and continuing to address their needs
- Internal Focus

To

- Team leader, more like a conductor bringing orchestra members together
- Flexible structure designed around customer needs
- Incentives provided
- Open access to information
- Innovative new partnerships
- New insights into prospective future customer and market needs
- Intimate understanding of markets and continuous listening to customers

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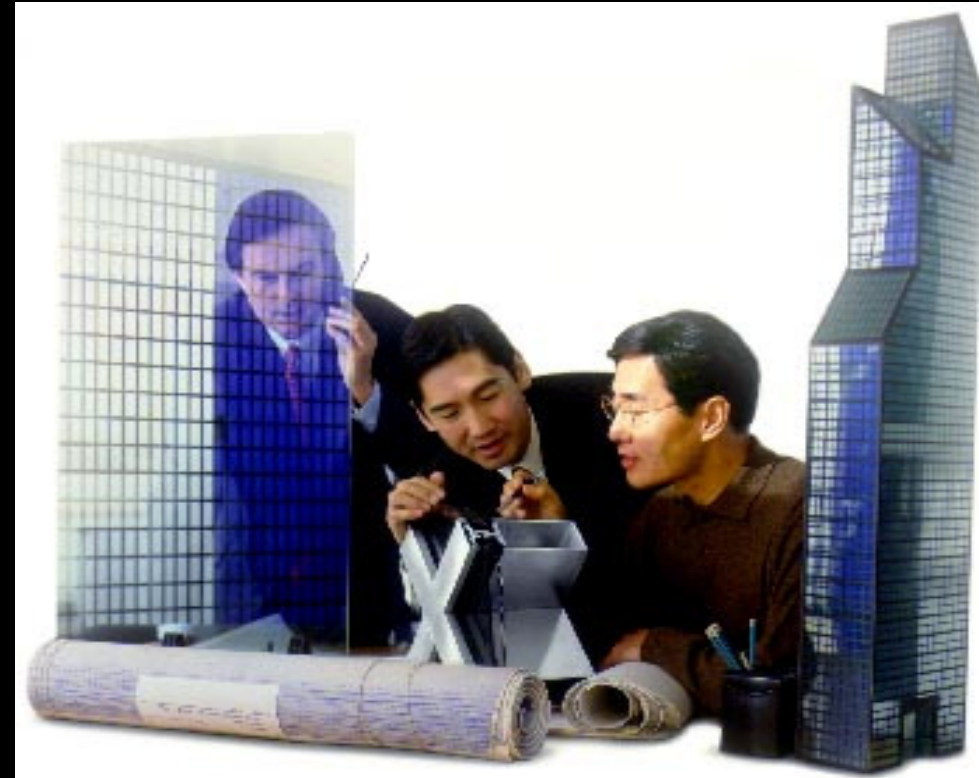


Characteristics of Innovation-Focused People

- Passion
- Openness
- Listeners
- Learners
- Change agents

To lead major new opportunities requires an Unusual Combination of Creativity and Discipline

- ~ Meyers Briggs “N T” Profile
- “Rainmaker” Success rate 95 x Average



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Innovation applies to Everyone Everywhere

- Technology
- New Markets
- Supply Chain
- IT
- Business Processes
- Sustainable Development in 3rd World

Today we will Focus on Growing Major
New Opportunities in Construction

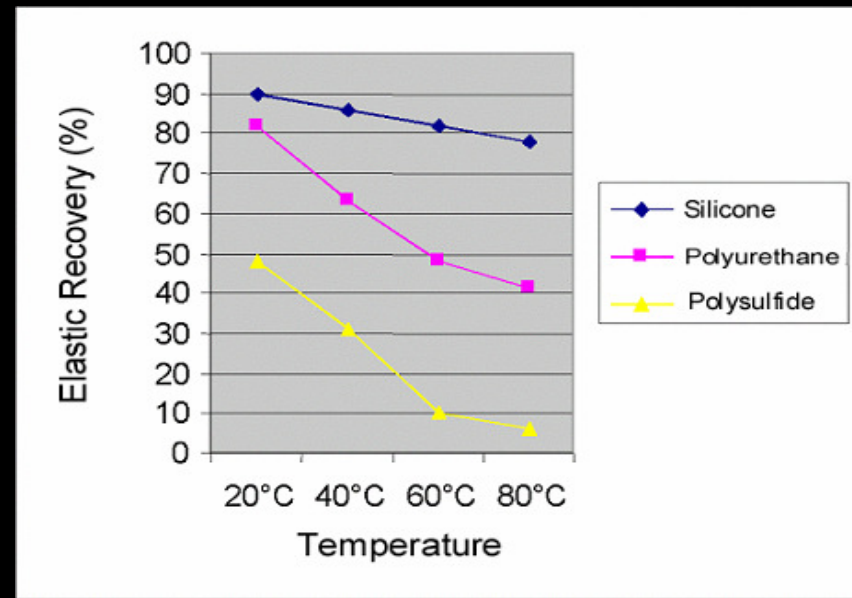
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Dow Corning Silicon Chemistry Benefits the Construction Industry

- A combination of physical properties not found in other polymers
- Outstanding heat stability – can be used in applications where organic materials would melt or decompose
- Stability at high temperatures
- Resistance to age, sunlight, moisture and temperature extremes
- Chemical resistance

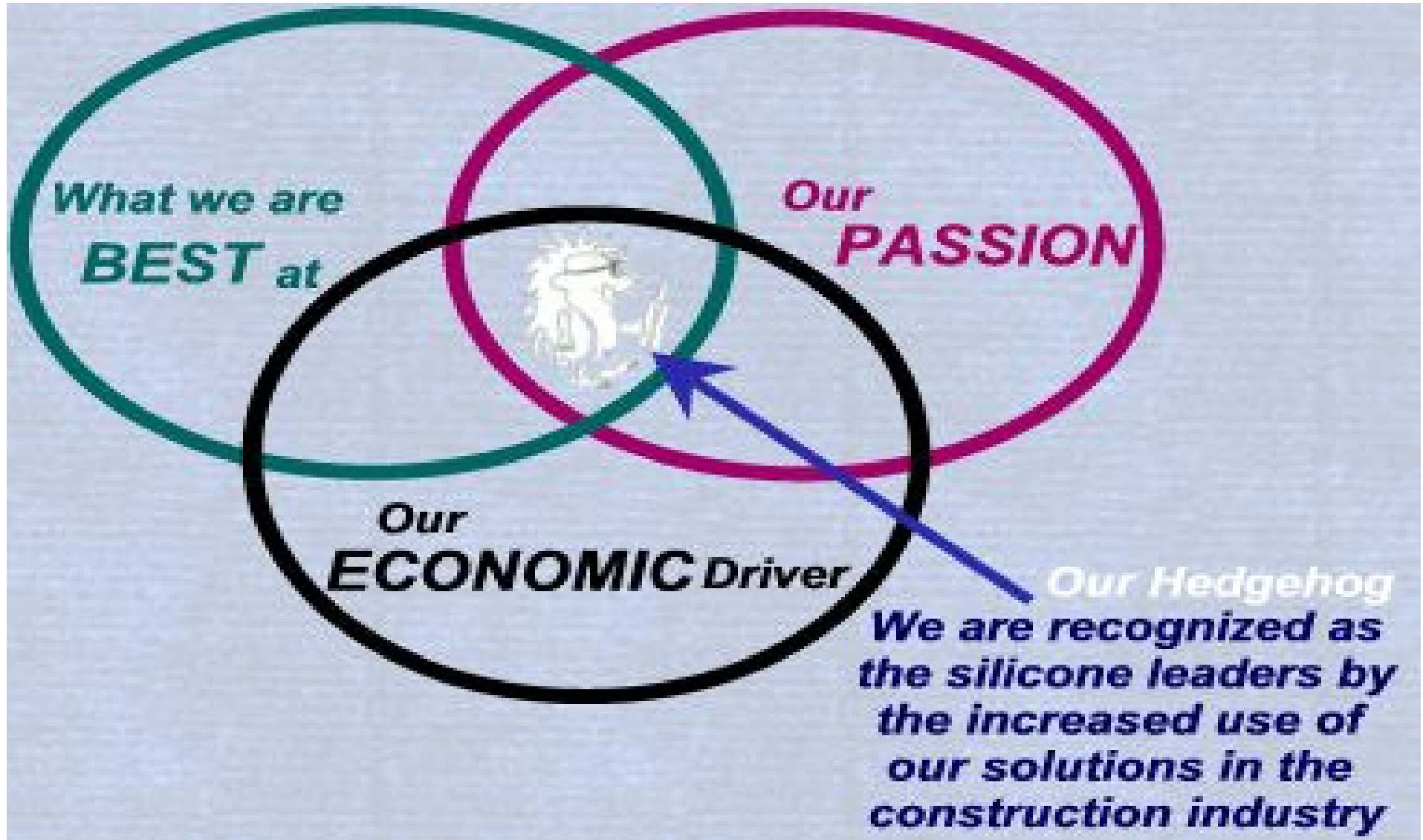


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Must have a focus for Effective Innovation



Dow Corning Construction Industry uses “HedgeHog” concept from “Good to Great” by Jim Collins

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Dow Corning Construction Industry uses WinOvations Process for Major Innovation

A practical method of applying to New Ideas:

- **Best Marketing Practices**
- **Best Innovation Practices**
- **Best Business Practices**

In order to Improve Return on Investment

- **Marketing ROI**
- **Development ROI**
- **Business ROI**

WinOvations Process by Greg Stevens

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Key Learning: Major Innovation Opportunities Do NOT Progress Sequentially

Traditional “Stage-Gate®” Processes work OK for Small/Derivative Opportunities:

Idea >> Stages >> Launch



Most companies claim “*Our Stage-Gate Is Unique*”

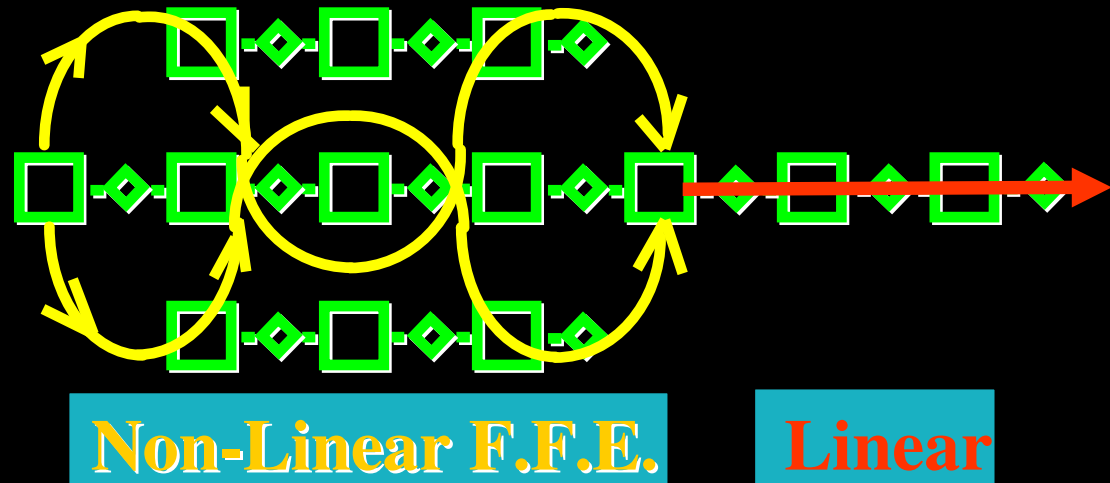
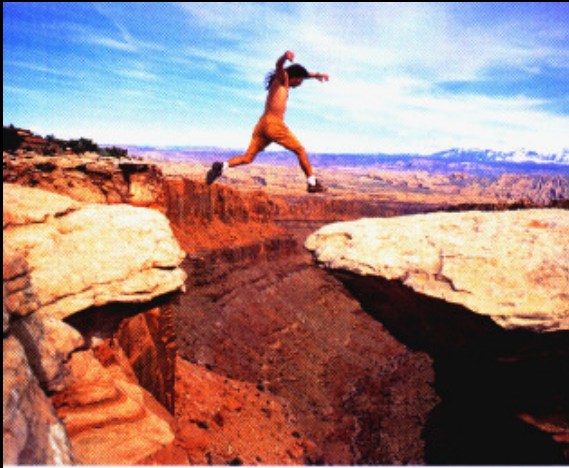
- Reality: 5-7 Stages in Most Stage-Gate Processes
- Reality: Most Companies Just Reinventing Cooper’s (or 1958 S.C. Johnson) Linear “Stage Gate” Models, & Spending Millions Doing It.

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Major Innovation is Non-Linear in Early Stages, Requiring Leaps of Creativity, & “Morphing,” To Identify Winners



Stages & Gates Still Exist but Real View of NBD Process Is Non-Linear, Especially in Fuzzy Front End (F.F.E.)



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Key Insights Developed by Greg Stevens

- **It's the people**
 - “Rainmakers” (“NT’s”) vs. “Finishers”
- **Early Qualification of Opportunity**
 - Hedgehog (“Good to Great”)
 - Gut Level Screen
 - Project Gap Analysis (5 Essential Vitamins)
- **Really Understand the Value**
 - If you don't know the customer's financial model you do not know the value and cannot identify a winning solution
 - This helps maximise the value (pricing)

Ideas morph or change often several times before the winner is finally identified

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It's The People

- Full time
- Trained
- Rainmaker Personality

Personality Index	Profit per Analyst, \$ Millions			Times More Effective, Top Vs. Bottom Third
	Bottom Third <small>N = 23 Analysts</small>	Middle Third <small>N = 23 Analysts</small>	Top Third <small>N = 23 Analysts</small>	
Rainmaker Index	\$0.09	\$0.93	\$8.23 <i>Rainmakers!</i>	95 X
MBTI® Based CI Index	\$0.65	\$1.37	\$7.37	11 X

Rainmaker concept from WinOvations by Greg Stevens

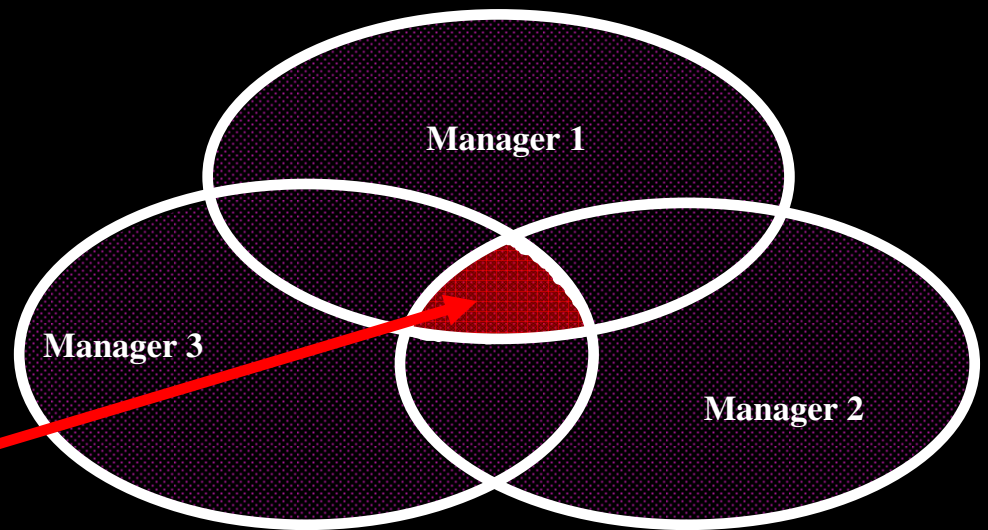


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Gut Level Screen

- Gut-Level-Screen is a key element to define and record **top management's desired direction**, and “no-go” regions.
- Established through individual personal interviews with senior business managers – looks for **common areas of excitement**.

Construction Industry developed Gut Level Screen & “Hedgehog” to provide focus for NBD efforts



Zone of Agreement & Excitement



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Project Gap Analysis

- Starts with a proposed **four-part product definition** (product, main function to be performed, kind of customer, what geography)
- Identifies **gaps in our knowledge** by asking...
 1. Does it fit the direction?
 2. Is there a need?
 3. Is there a Competitive Advantage?
 4. **Do you know the cost model?**
 5. **Do you know the value?**

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Key Learnings – Idea Qualification

- Realistically the first idea will not be perfect but it should at least hold together logically.
- Be honest – the goal here is to identify gaps in your knowledge not to sell an idea.
- The 5 basic questions help you focus very early.
- This is consistent with **Marketing best practice**

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Idea Morphing APPLIED

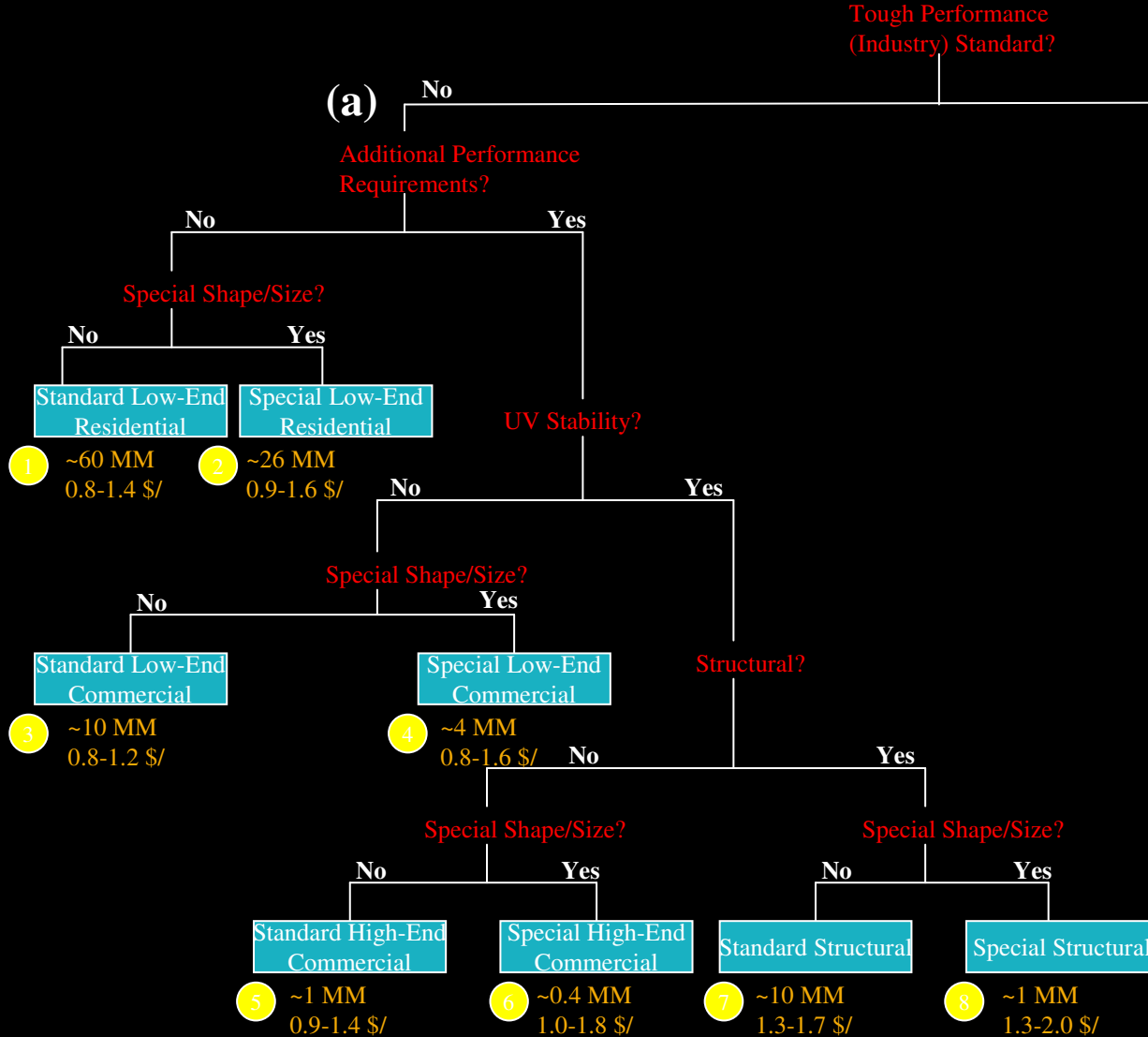
- Total cost analyses showed in-situ applied silicon-based **materials** to be highly competitive, have significant projected productivity gains, and being able to capture high value.
 - The concept of a chemically curing, in-situ silicon-based **material** was born.
 - As the understanding grew, we learnt that a “**Total Seal System**” provided increased value through automated high production, low cost, reliable quality, long life benefits in an “**All-in-One Automated System**”.
- The initial idea had morphed !!

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Functional Value Segmentation



Important in order to understand in which segments a solution can be positioned and at what value –

Provides estimates of total size and value of opportunity



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Marketing Strategy – Creating the Blue Ocean *

Eliminate

Several Manufacturing Step(s), with related Time, Capital, Cost, Failure, Waste & Mess
Additional Operations for “Specials”

Raise

Profitability,
Productivity/Capacity,
Ability to Grow,
Ease of Use,
Quality/Consistency,
Documentation,
Ability to meet Global Specs (NA)

Reduce

Cost & Capital per Unit,
Labor & Supervision Content,
Field Failures

Create

One Stop Supply
Ability to meet Global Specs (Asia)

* From “Blue Ocean Strategy” by Kim & Mauborgne

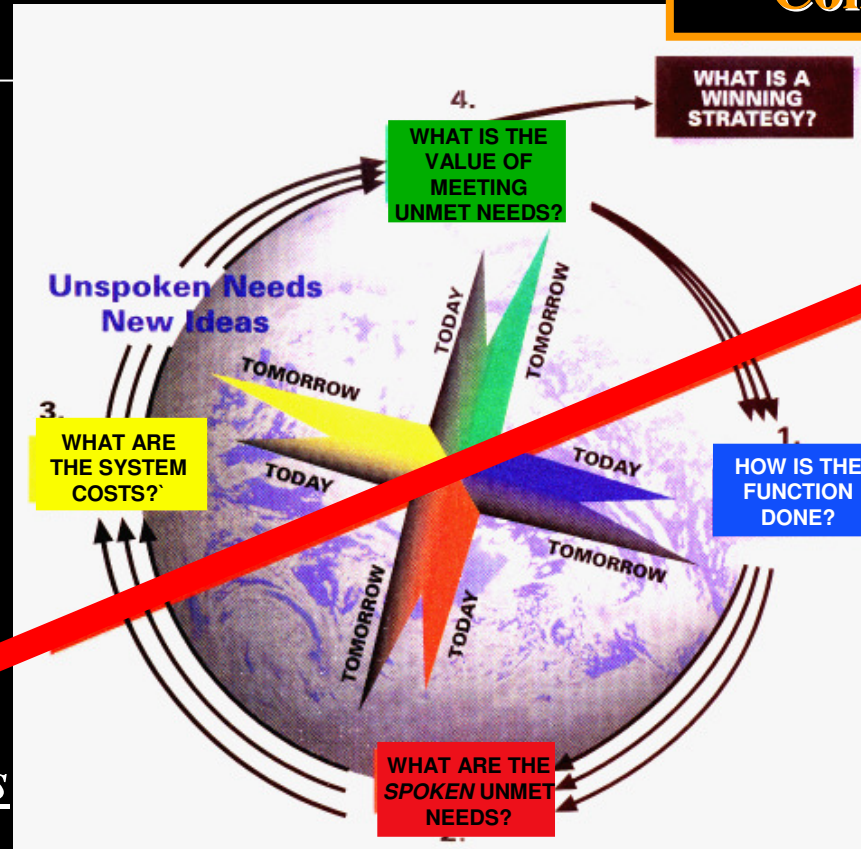
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WinOvations Process Applied in Dow Corning

**End of an *Individual's* F.F.E. Analysis
Move into Commercialisation**



Profits

Winning Actions

Winning Tactics

Gap-Analysis

Idea Management

Success-Wheel

Gut-Level-Screen

Stages: Ideation Shaping Analysis Validation Develop & Implement



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Integrating into Dow Corning Commercialisation Process *

- Much more solid understanding of opportunity resulted in successful **1st Milestone review**, followed by...
 - **Technical proof of concept** work initiated (focused primarily on cure and adhesion)
 - Patent landscaping & mapping, **prior art search**, freedom to practice and patentability assessments
 - Completion of **Project Plan** and successful **2nd Milestone review**
-
- ***Dow Corning uses the PRTM Commercialisation Excellence (CE) process**

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Key Learnings – Broader Implications

- Incorporate WinOvations **Marketing best practice** into any project and use WinOvations coaches as a resource for Front End/Phase 2 work to answer the four key questions:
 - How is it done today?
 - How much does it cost today?
 - What is wrong with how it is done today?
 - What is the value of improvements?
- i.e. If we do not know how it is done now, what it costs now and what is wrong with how it is done nowwe have no idea what our value is.
- Listening to the customers needs, changes/morphs ideas into potentially better alternatives.



Smart Innovation

Dow Corning Experience on Segmentation

- **Needs-based segmentation showed customers needs vary significantly:**
 - Some need performance, the latest innovations
 - Others need help keeping up with demand
 - Mature businesses must drive down costs
 - Some want the lowest price, don't need high levels of support
- **Developed new ways to provide value:**
 - Differentiation by addressing customer needs – exactly.
 - Providing solutions to help customers solve problems and seize new opportunities
 - Offering new web-enabled business model for “commodity” silicones

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Smart Innovation - Branding



Dow Corning Corporate Brand
Technology leads. Service wins.
Customer-focused solutions



Xiameter Brand

Clarity. Choice. Freedom to succeed.

***Value based
product solutions***

Dow Corning Commercial Brand

Brand Driver: Exactly

***Value added
product & service solutions***



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Conclusions

- A comprehensive approach is required for Successful Innovation
- The WinOvations process works well; particularly in the initial stages of a new Innovation Opportunity – it helps us in refining a rough idea into an idea that we can focus upon.
- The discipline (particularly the Gut Level Screen, the 5 Essential Vitamins) focused on understanding the cost models and business case can help us ensure that we have a winning strategy **before** we invest heavily in a later phase Commercialisation project.
- The process, the discipline and the focus support and enable Marketing Excellence.
- The reduced amount of wasted resource and increased chances of success

Improves the Marketing and Business ROI

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THANK YOU

For Your Time

and Interest

Questions?

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