

Excellence and Innovation for Business

Welcome!



gupta@iit.edu
praveen@accelper.com

Praveen Gupta
President, Accelper Consulting
Architect, Brinnovation™
Pioneer, Six Sigma
ASQ Fellow

Objective and Outline Today

Objective:

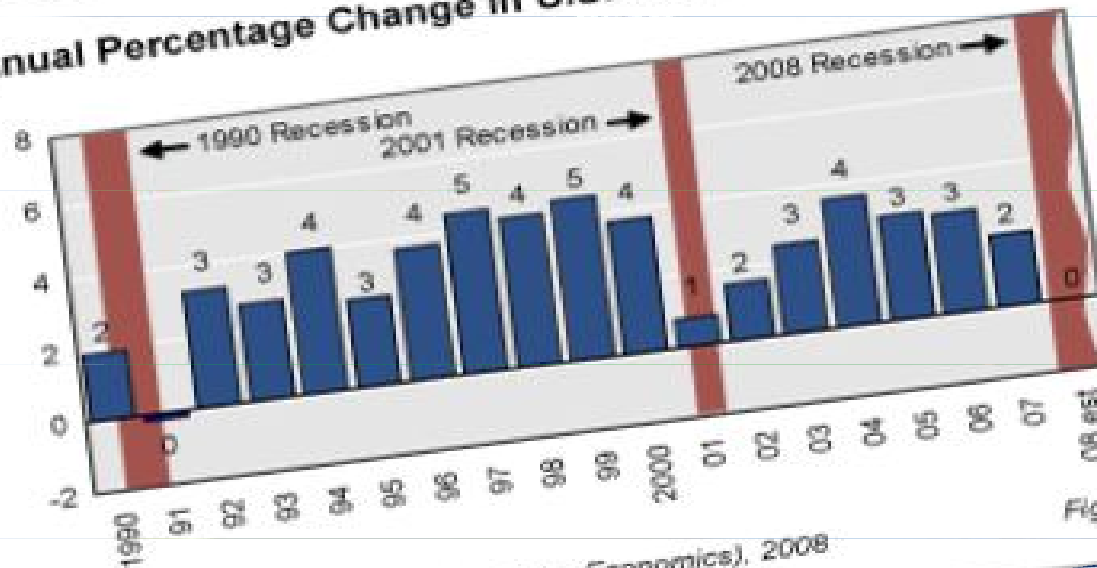
Understanding role of excellence and innovation for ensuring profitable growth and creating new opportunities

Outline:

1. Understanding Innovation
2. Making innovation
 - Pervasive
 - Predictive
 - Profitable
3. Our Portfolio of Innovation Programs

U.S. Economic Outlook

Annual Percentage Change in U.S. GDP: 1990-2008



Source: U.S. BEA (estimate by Computer Economics), 2008

Figure 1



Mexico Economy

Economy down 8.5%
GDP down 5.5%
Lost Factory Orders/ Jobs
Worse than Tequila Crisis

What to do?





Bill Gates' Business Model

**Build
Customer
Relationships**

1

**Drive
Business
Innovation**

2

Create Value with people.

**Improve
Operations**

4

**Connect with
Partners and
Suppliers**

3

Delight customers and grow business.

Ref: Gates, CES 2007

Current Model for Success

Improve
Operations
(Layoff people)

4

Squeeze (Kill)
Suppliers

3

People are the problem.!

Desperately
Seeking
Customers

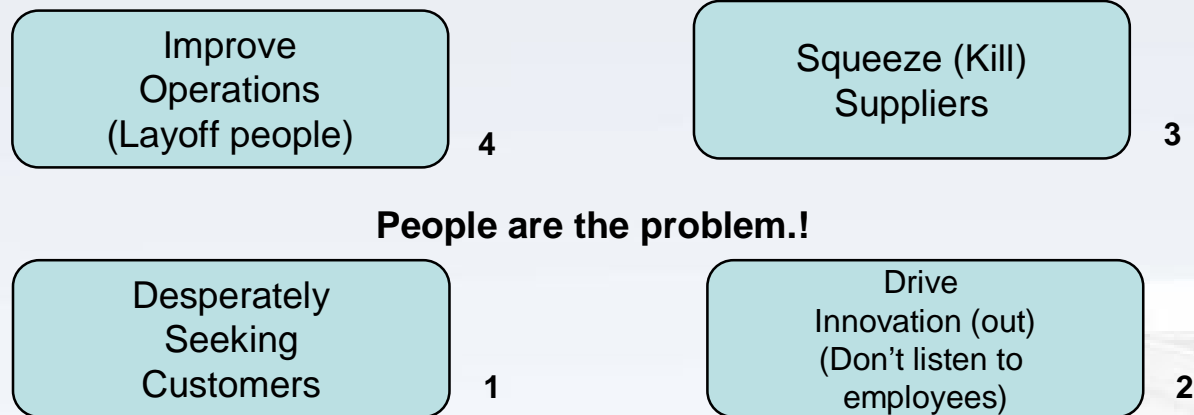
1

Drive
Innovation (out)
(Don't listen to
employees)

2

Improve margin now and die tomorrow.

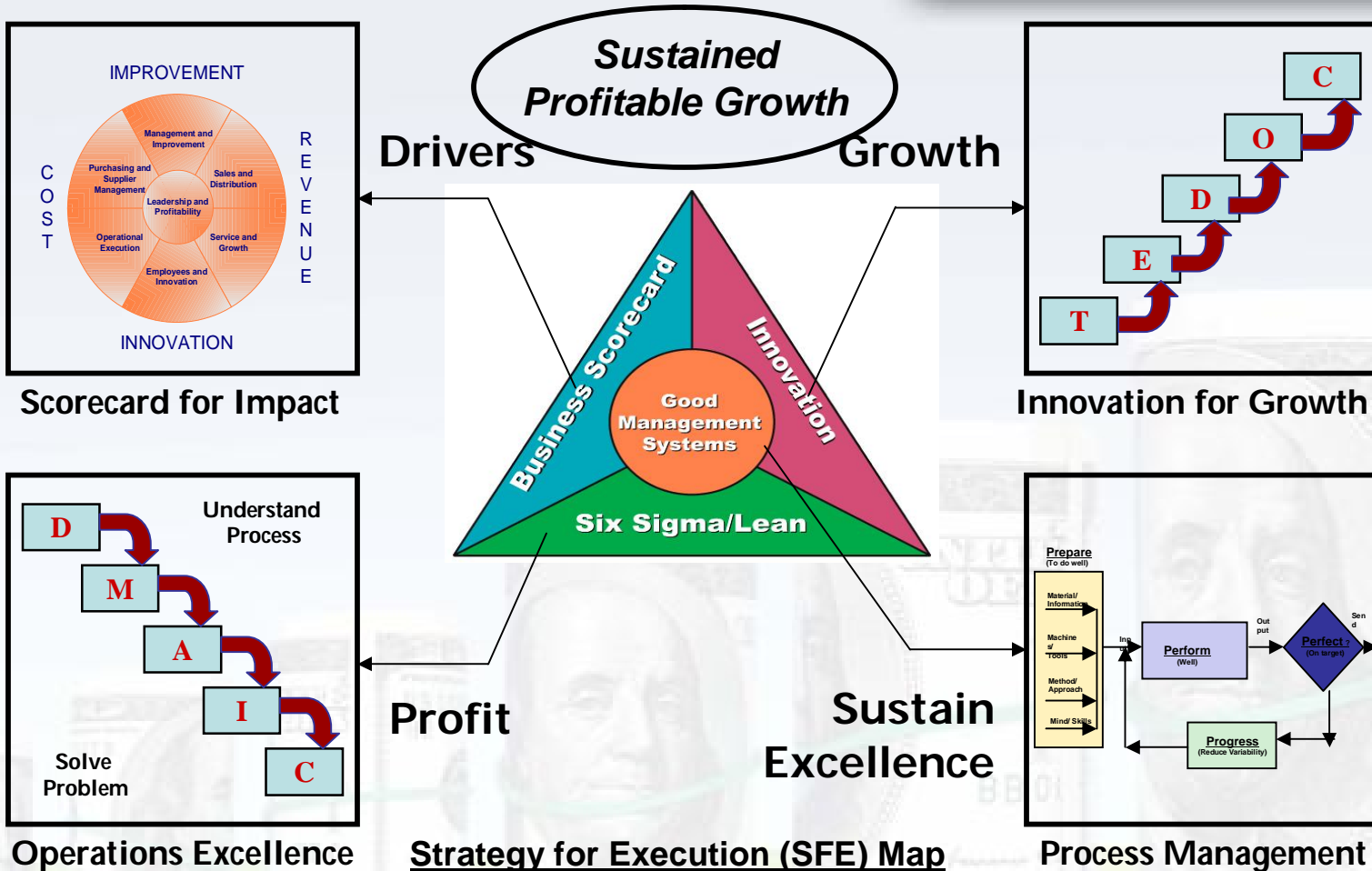
Current Model for Success



Improve margin now and die tomorrow.

Does it work?

Sustaining Profitable Growth





Performance Evaluation

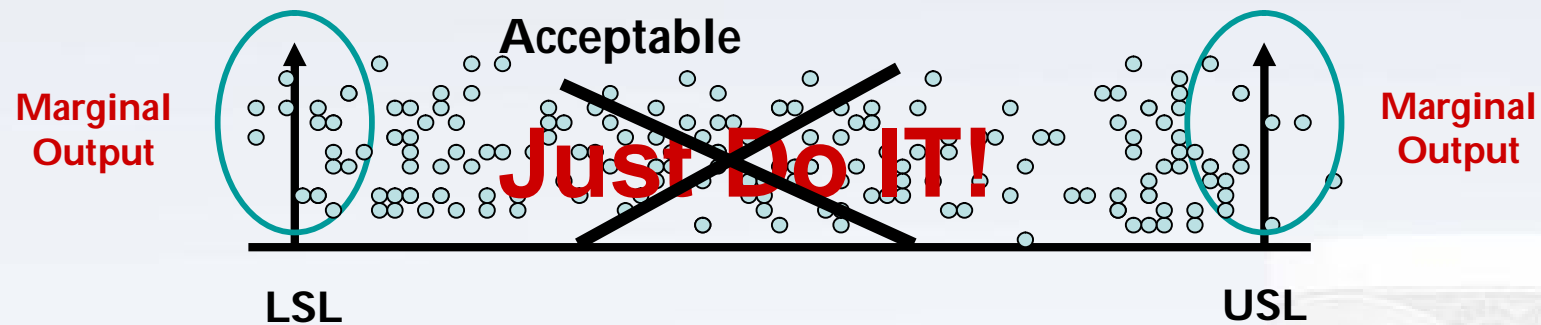
**P
E
R
F
O
R
M
A
N
C
E**

| | | | | | Perfection | Innovation | ? |
|------------|----------------------|-------------------------|---------------------------|----------------------------|------------------------|-------------------------------|-------------------------|
| Experience | | | | Performance Control | Praveen G. /Kaplan | Praveen G. /Christensen | |
| 100% | | | Design Control | Bill Smith/ Mikel Harry | 4P Model, Scorecard | Brinnovation/ Innovation | |
| 90% | | Process Control | Taguchi/ Tom Peters | Six Sigma/ ISO 9000 | | | |
| 80% | | Ishikawa/ Juran | DFM/JIT/ MBNQA/ | | | | |
| 70% | Product Control | Problem Solving | | | | | |
| 60% | Shewhart/ Deming | | | | | | |
| 50% | PDCA | | | | | | |
| | 1960 Rust Removal | 1970 Quality Control | 1980 Quality Assurance | 1990 Quality Management | 2000 Knowledge Mgmt | 2010 Design/ Innovation | 2020 Customer Design |

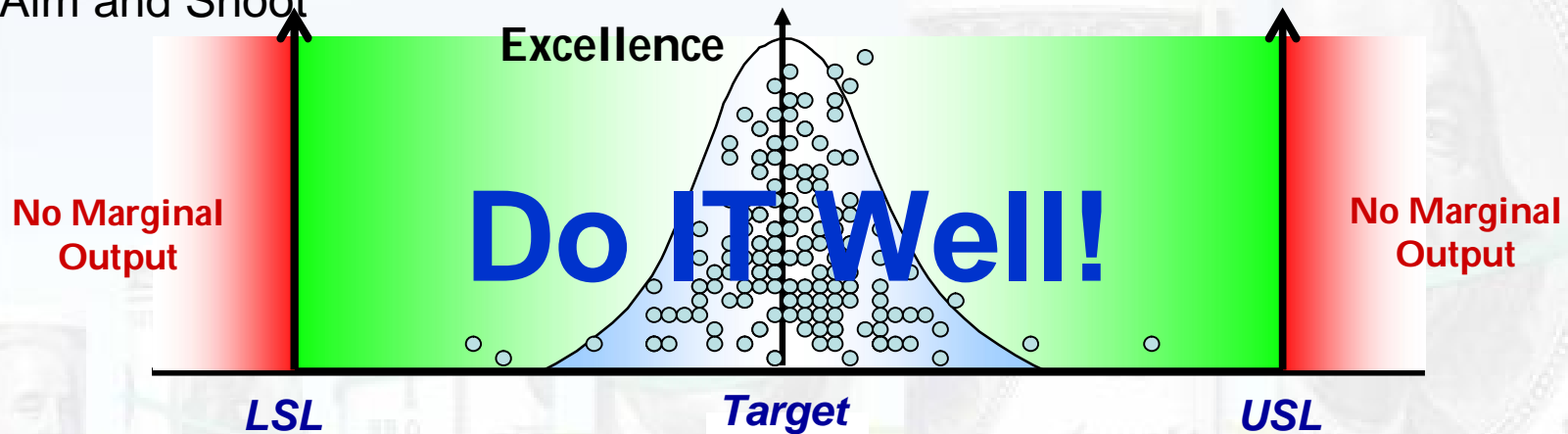


Excellence First!

Shoot and Aim



We build to limits, and check for acceptability through inspection within limits
Aim and Shoot





Excellence First!

Shoot and Aim

or

Aim and Shoot

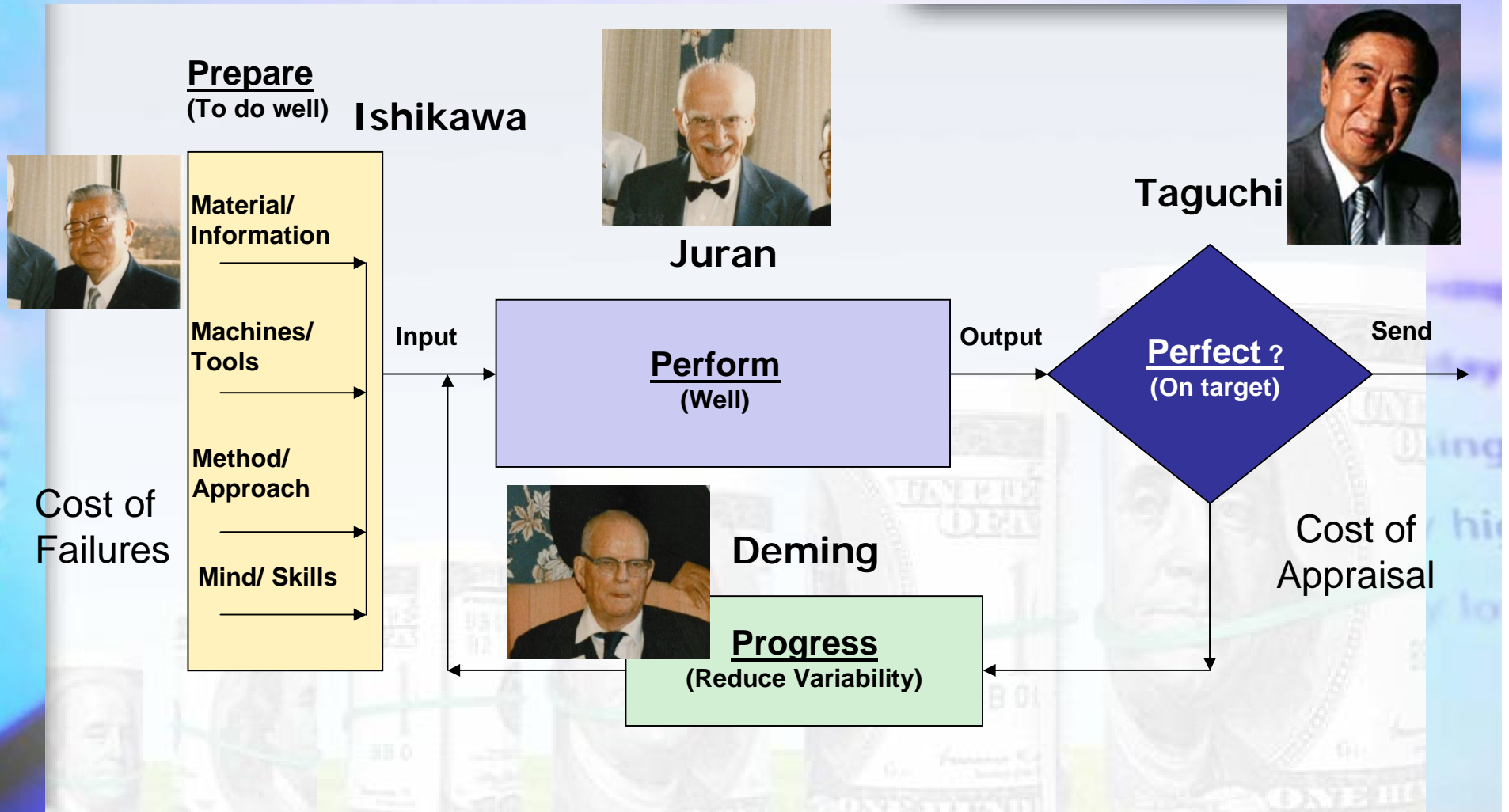


Process Excellence Model

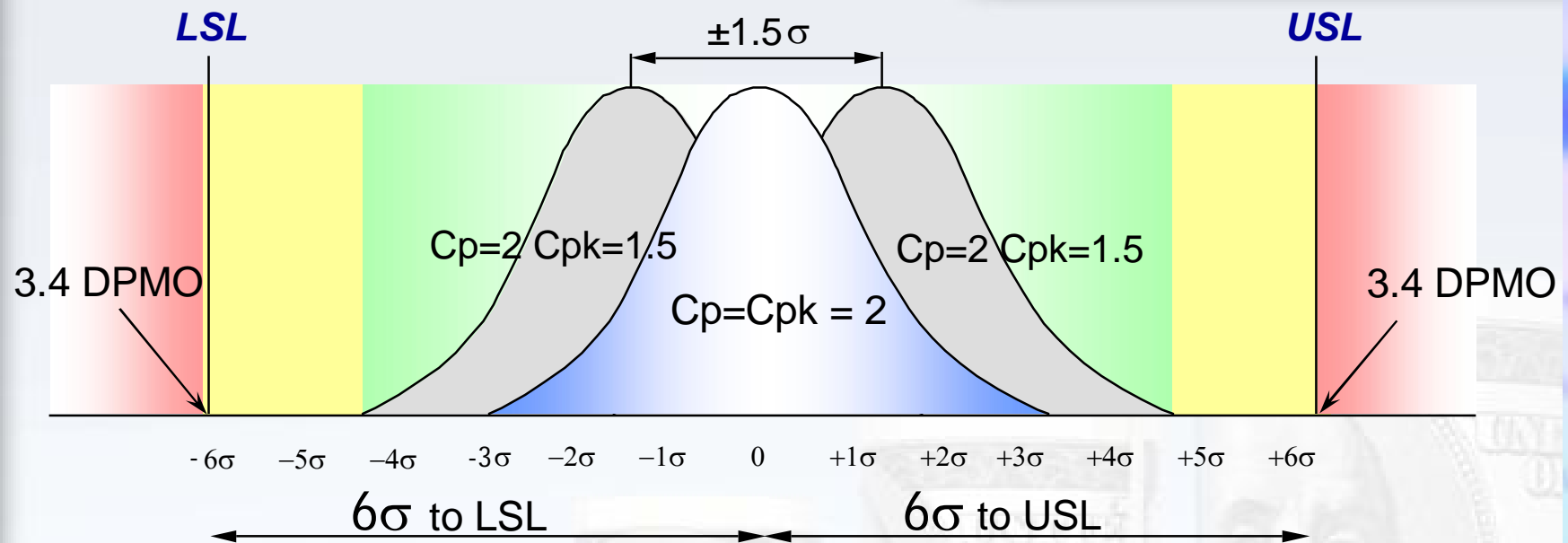


OCAP

4P



Six Sigma



Six Sigma means having **twice** the capability as required by the customer, bringing closer to the target.

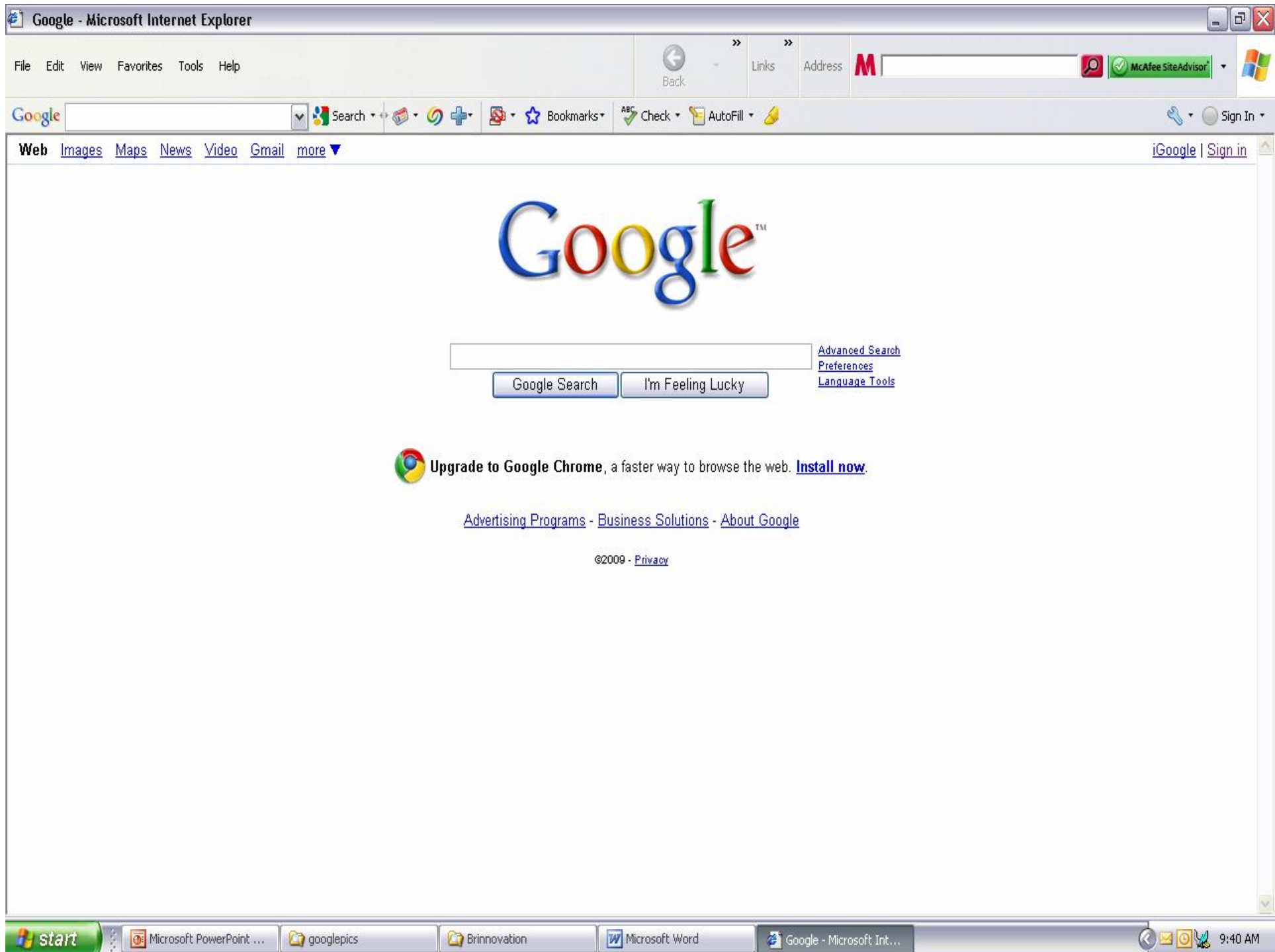












Information Technology - Google Search - Microsoft Internet Explorer

File Edit View Favorites Tools Help


Back Links Address M


Google Information Technology Search Advanced Search Preferences


Web Images Maps News Video Gmail more Sign In


Google Information Technology Search Advanced Search Preferences


Web Blogs Books Results 1 - 10 of about 224,000,000 for Information Technology [definition]. (0.14 seconds)


Information Technology  www.infotech.northwestern.edu Earn your graduate IT degree from Northwestern University!


Information Technology  www.worldcampus.PSU.edu Online IT Education from Recognized & Respected Penn State University.


Information Tech Degrees  Capella.edu/IT Online IT Degree Programs. Flexible Schedules. Financial Aid Available.


Information technology - Wikipedia, the free encyclopedia 
Today, the term **information technology** has ballooned to encompass many aspects of computing and **technology**, and the term has become very recognizable. ...
en.wikipedia.org/wiki/Information_technology - 35k - [Cached](#) - [Similar pages](#)


RIT Information Technology 
offers bachelors and masters degrees in **information technology**, a masters degree in software development and management, and an advanced certificate in ...
www.it.rit.edu/ - 29k - [Cached](#) - [Similar pages](#)


Northwestern University Information Technology 
Northwetsern University **Information Technology** | NUIT.
www.it.northwestern.edu/ - [Similar pages](#)


The Chronicle of Higher Education: Information Technology 
Information technology news and resources by the No. 1 news and job-information source for higher education, The Chronicle of Higher Education.
chronicle.com/infotech/ - 21k - [Cached](#) - [Similar pages](#)


Information Technology – All About Information Technology - What ... 
Information Technology and IT definition. What **information technology** actually means. How **information technology** is different from computer science.
jobsearchtech.about.com/od/careersintechology/p/ITDefinition.htm - 24k -


IT Managed Services 
Network and Help Desk Support
Call 312-602-6550
www.falkorgroup.com
Chicago, IL

Free IT Management Book 
IT Management 101. Plus ongoing **information technology** advice.
www.ITBusinessEdge.com

Information Tech Schools 
Request free info from schools with **Information Technology** programs!
www.Top10ComputerSchools.com

Info Technology Degrees 
Get your education online.
Accredited programs and schools.
www.EducationDegreeSource.com

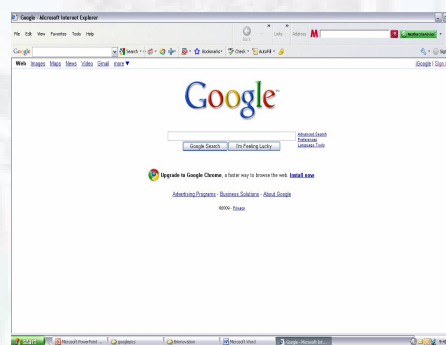
Symantec CIO Digest 
Review IT strategies from industry experts for C-Level audiences.
www.Symantec.com

Information Technology 
Chicago **information technology**
Call us to schedule an appointment
pottercomputer.com

start Microsoft PowerPoint ... googlepics Brinnovation Microsoft Word Information Technolo...

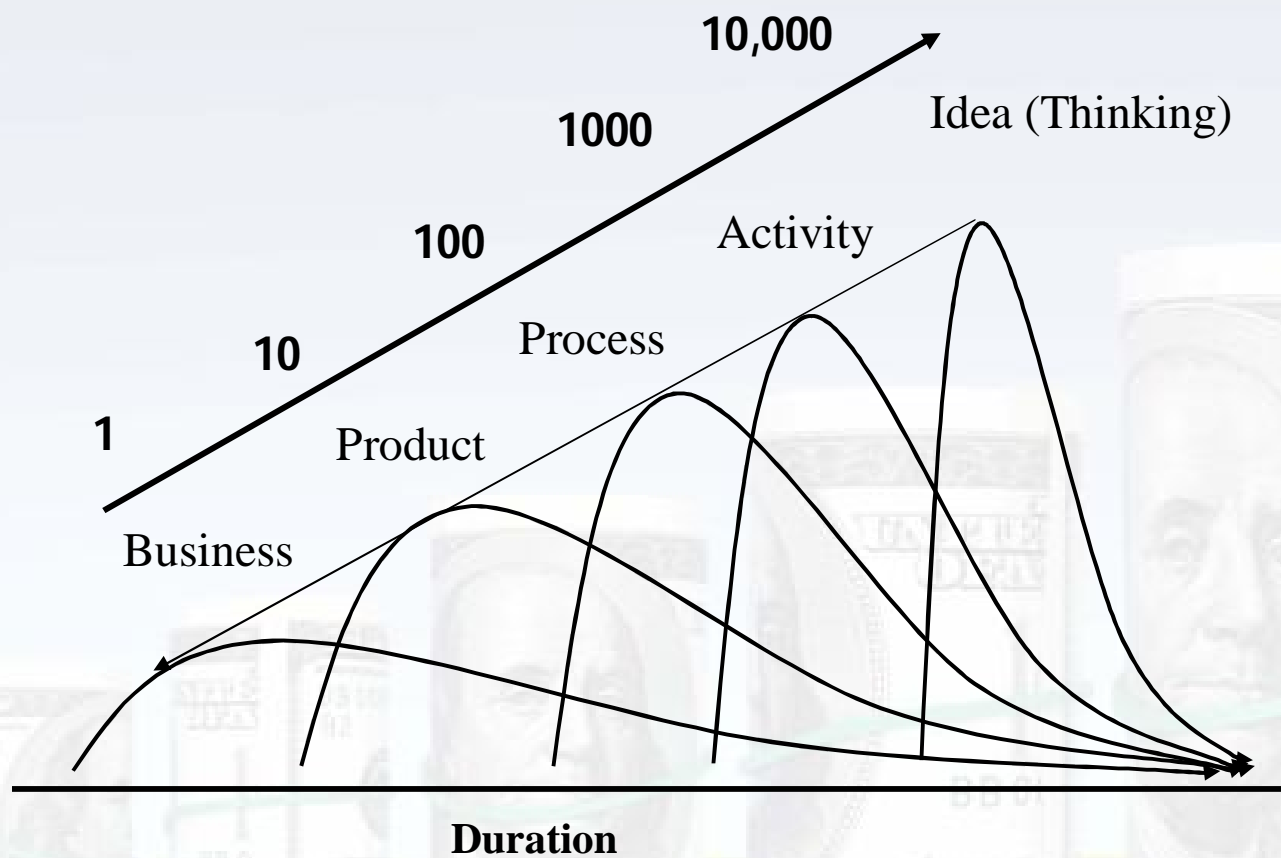
9:41 AM

What is the difference?



@Accelper 2009

Dynamics of Innovation



Innovation Framework

$$\text{Innovation} = \text{Effort} \times (\text{Speed of Thought})^2$$

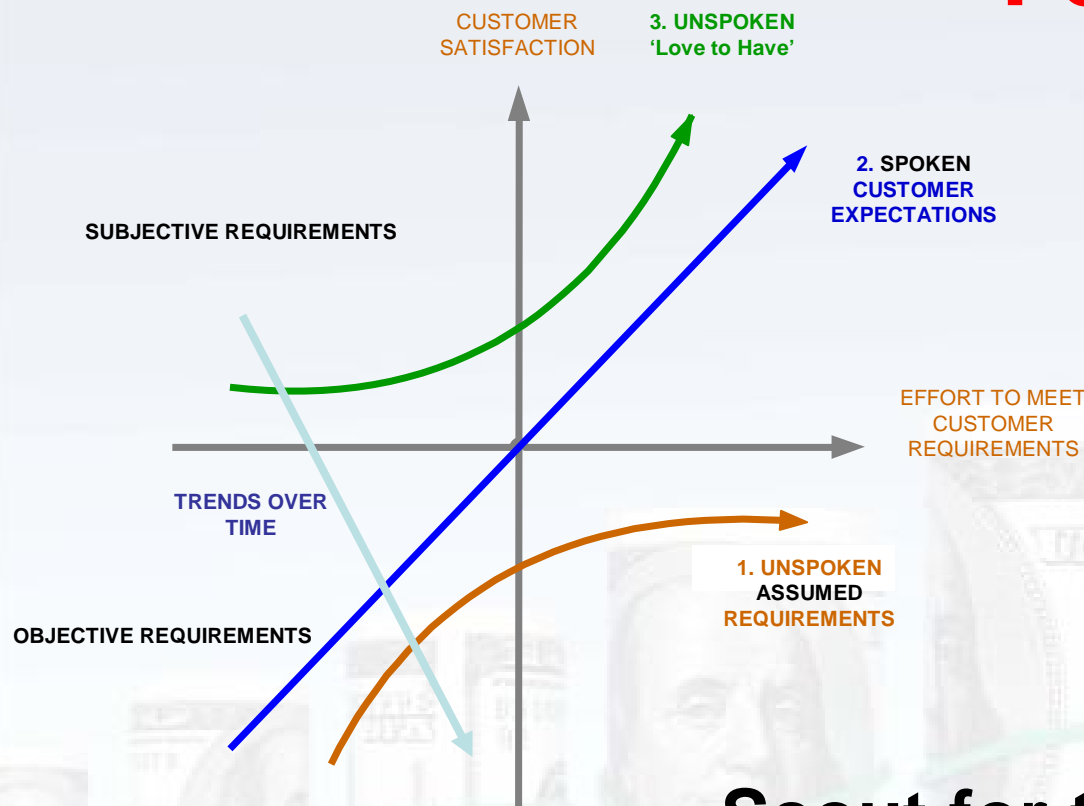
Where speed of thought is a function
Of Knowledge, Play and Imagination.



Love Thy Customers!

Feel their Pain☹

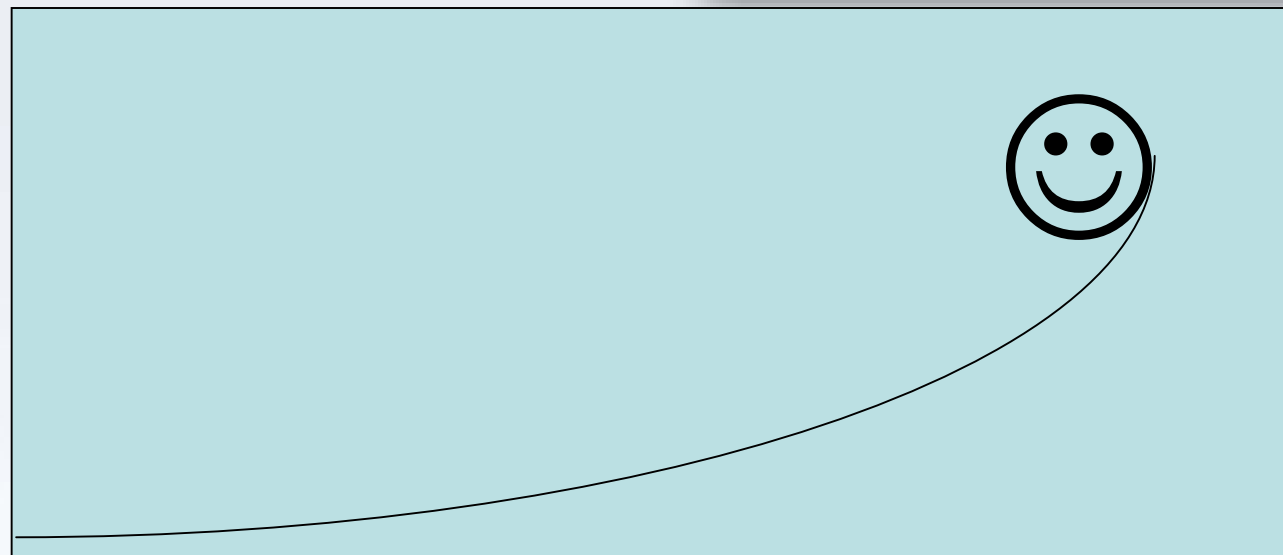
- Complaints
- Nagging problems
- Indecisions
- Repeat problems
- Upset employees
- Technical challenges
- Stagnation
- Circumstances



Scout for the opportunity!

Thinking G.C.S.F

**Thinking
Time (min)
Per Idea**



Good

Crazy

Stupid

Funny

Extent of Innovation

Create new opportunities by combining two or more ideas uniquely.

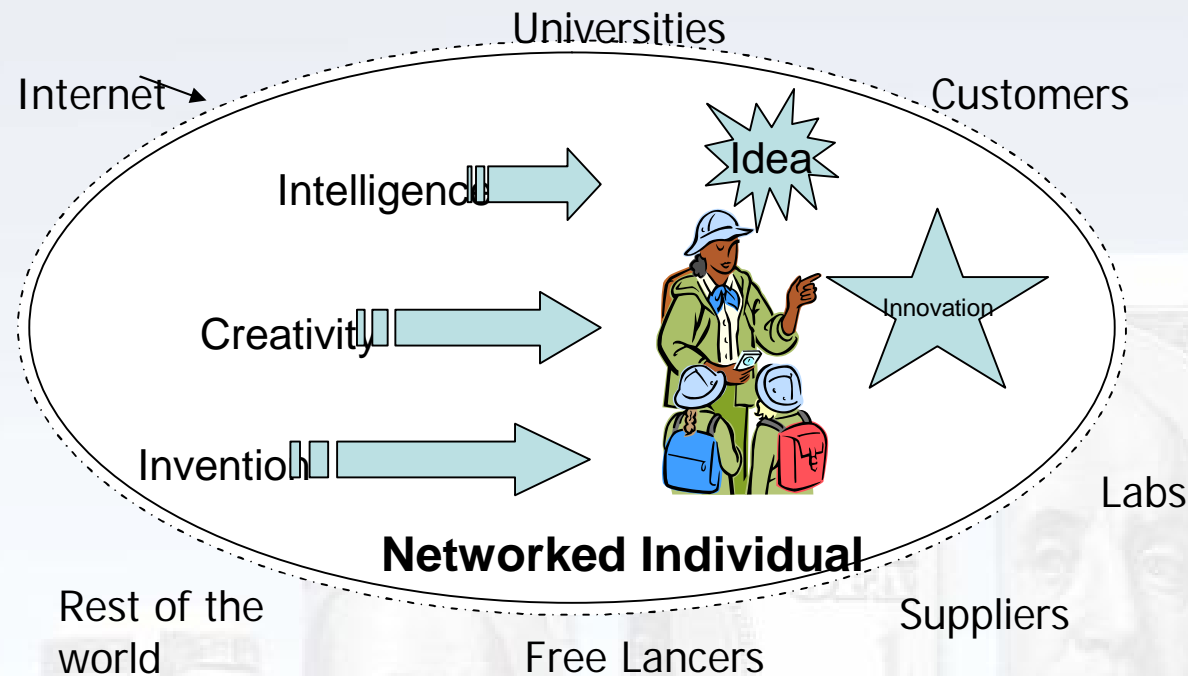
Make it Fun!



www.google.com

@Accelper 2009

The Building Block of Innovation



Innovation \approx Effort \times Speed of thought²
Innovation \approx Effort \times $f(\text{Knowledge, Play, Imagination})$

@Accelper 2009

Assessing Personal Innovation

| Resources (R) | Knowledge (K) | Play (P) | Imagination (I) | Innovation Value (Iv) | Comments |
|---|---|---|--|---|---|
| Degree of resources or time committed | Extent (%) of knowledge based on research and experience | Percentage (%) of possible combinations of various variables explored | Dimension extrapolated as a percentage of ideal solution for breakthrough improvement | Estimated Innovation Level | This is an initial estimation of the proposed model. Further work is required. |
| Example | | | | | |
| 50% (Limited time and insufficient resources) | 75% (Significant knowledge and experience gained, some latest work is to be explored) | 40% (Percentage of combination of variables explored mentally, experimentally or through simulation. Work is in progress) | 66% (Selected dimension is extrapolated such that improvement is expected to be about 30%, which is about 66% of the breakthrough improvement) | 0.182 (Long way to find an innovative solution due to lack of effort and play. To accelerate, one needs to improve all elements of innovation.) | Innovation Value = $0.5 * ((0.75 + 0.4 + 0.66) / 3)^2$ = 0.182 Einstein |

Think, You Can!

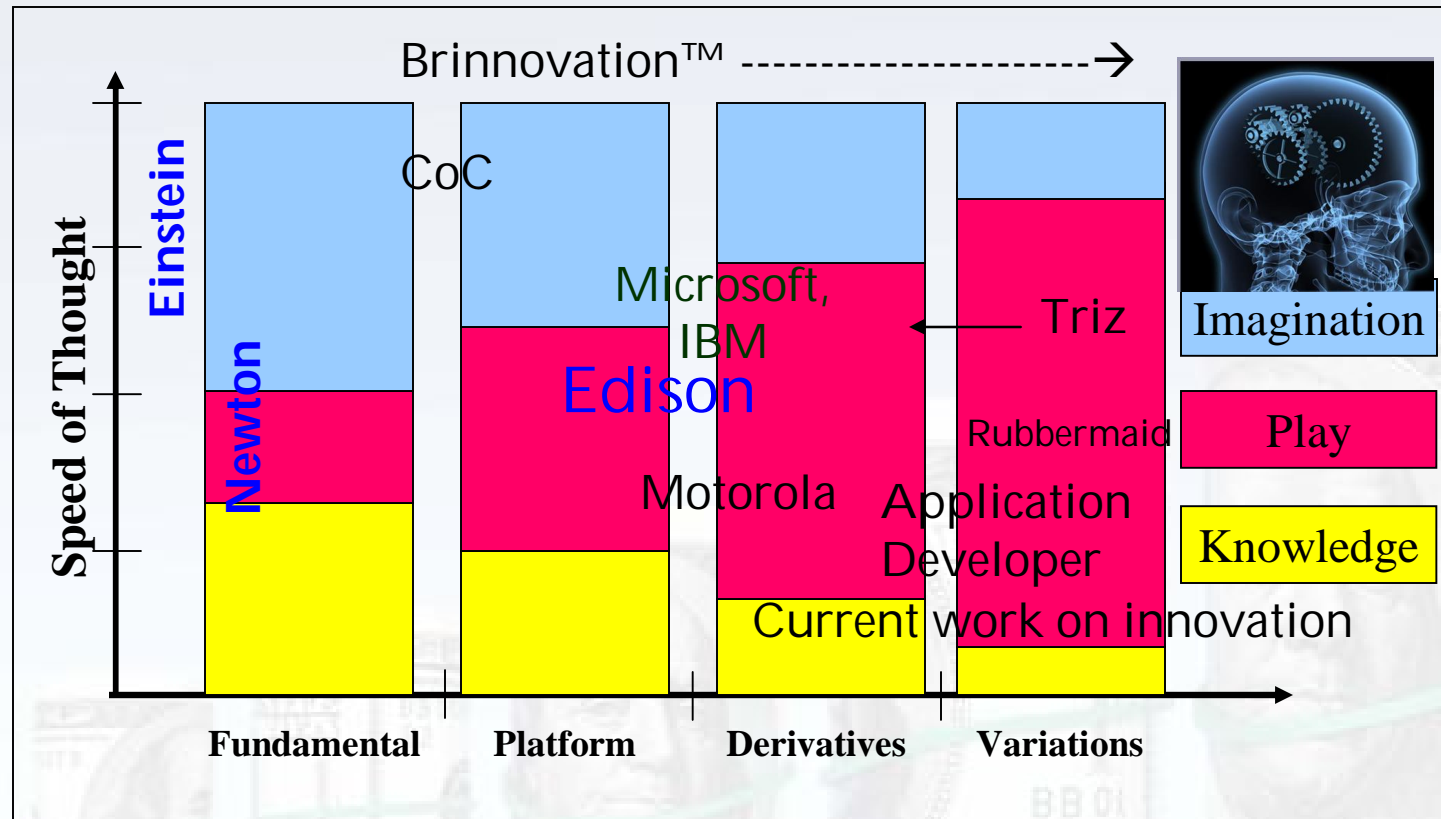


www.google.com

@Accelper 2009

Portfolio of Innovations

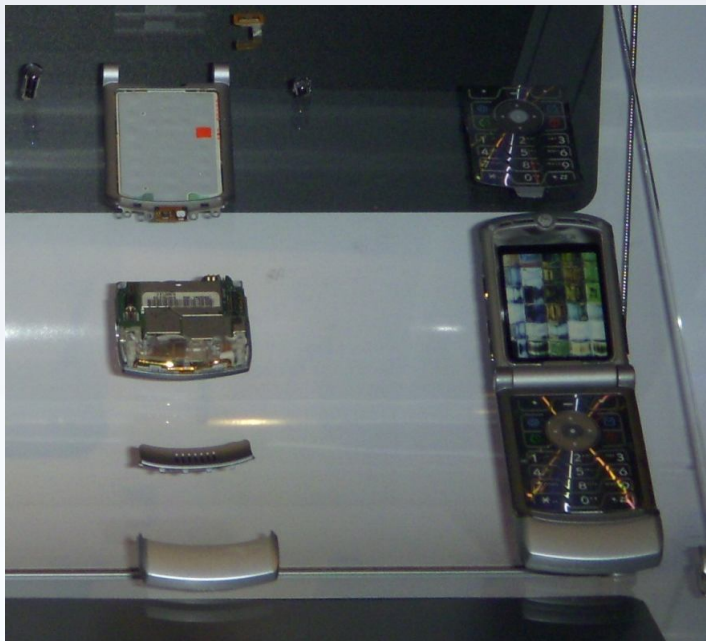
Innovation \approx Effort $\times f(\text{Knowledge, Play, Imagination})$



Have we defined our portfolio of innovations?

Portfolio of Innovations

Platform



Derivative



Variation

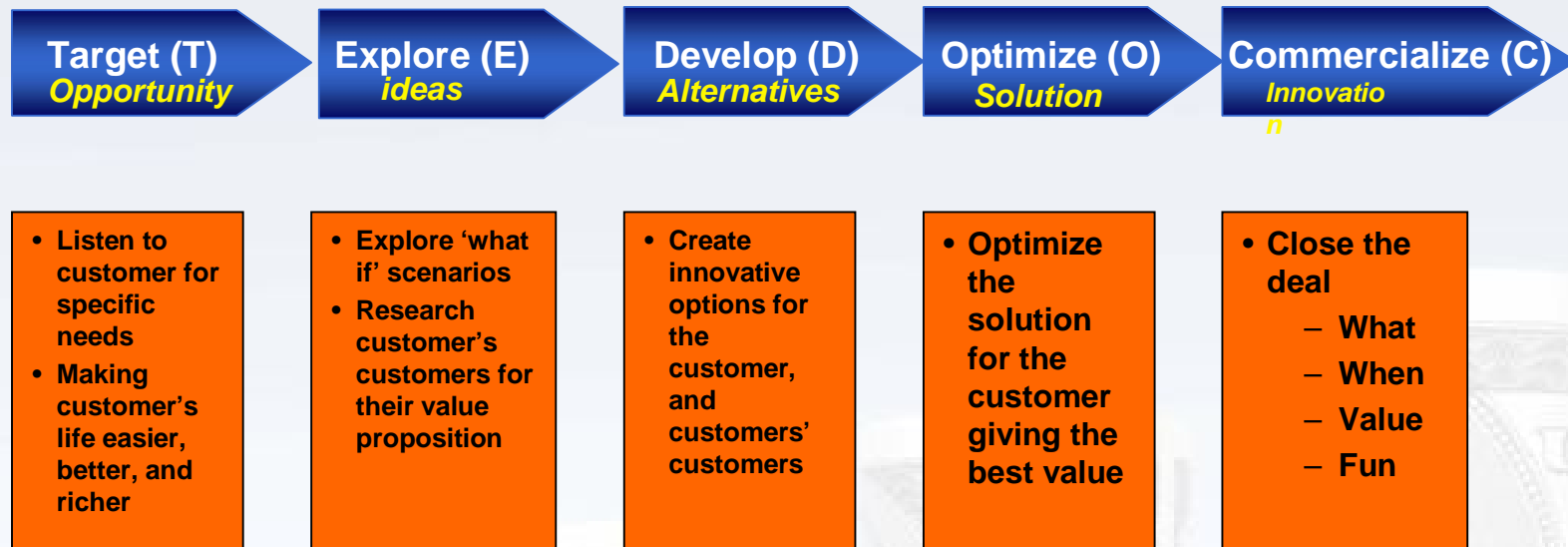


Breakthrough Innovation = Rule of 2

If less is better, at least 50% reduction ($/2$)

If more is better, at least 100% increase ($\times 2$)

The T.E.D.O.C. Methodology



Give customers more than they want at an affordable price.

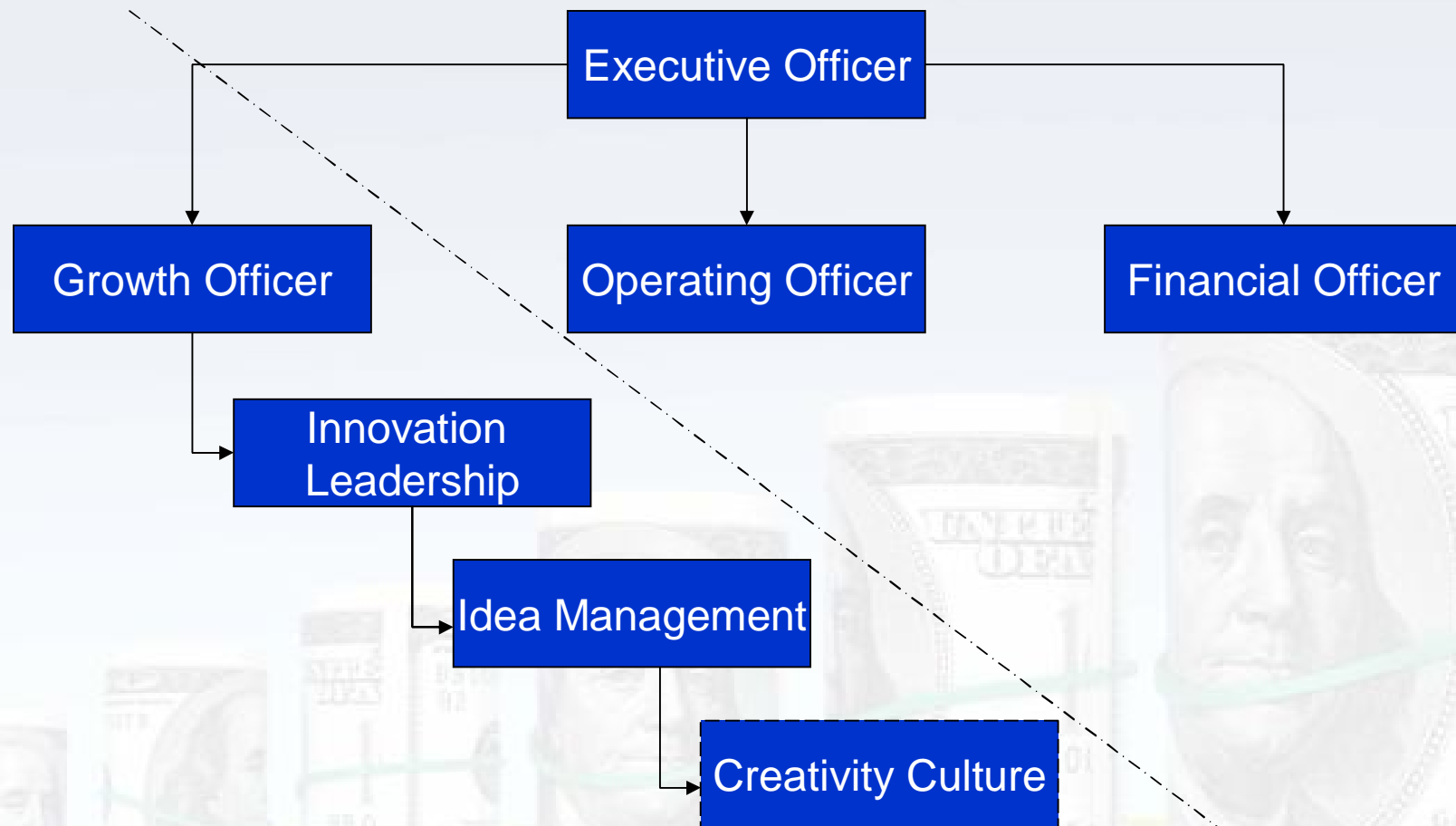
Which phase (s) we do and don't?

@Accelper 2009

Easing Customer Pains

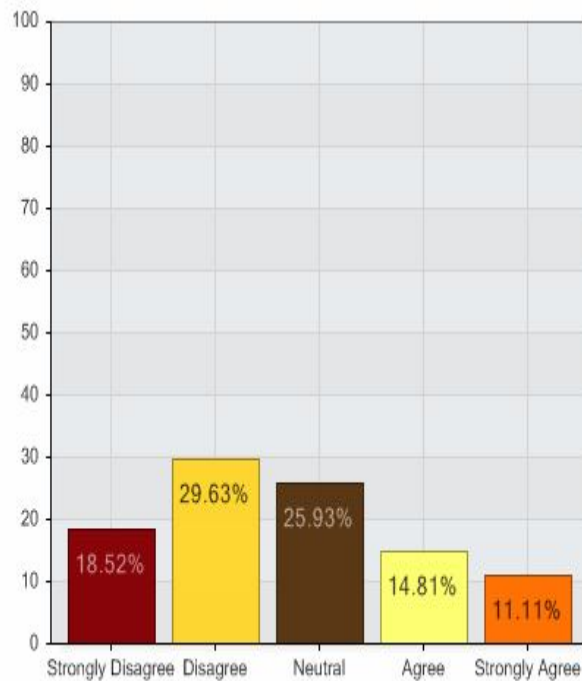
| Potential ideas for growth | Effort x <i>f</i> (Customer Knowledge, Play, Imagination) | | | |
|--|---|-------------------------|------------------------|----------------------------|
| Classify customer needs | Fundamental | Platform | Derivative | Variation |
| Categorize Customers' buying needs (Schedule for innovation) | 5 - 15 yr. Long Term | 2 - 5 yr. Short Term | 1 - 2 yr. Near Term | Now – 1/2 yr. Immediate |
| Ideas to innovate now (What to innovate) | | | | |

Organization for Innovation

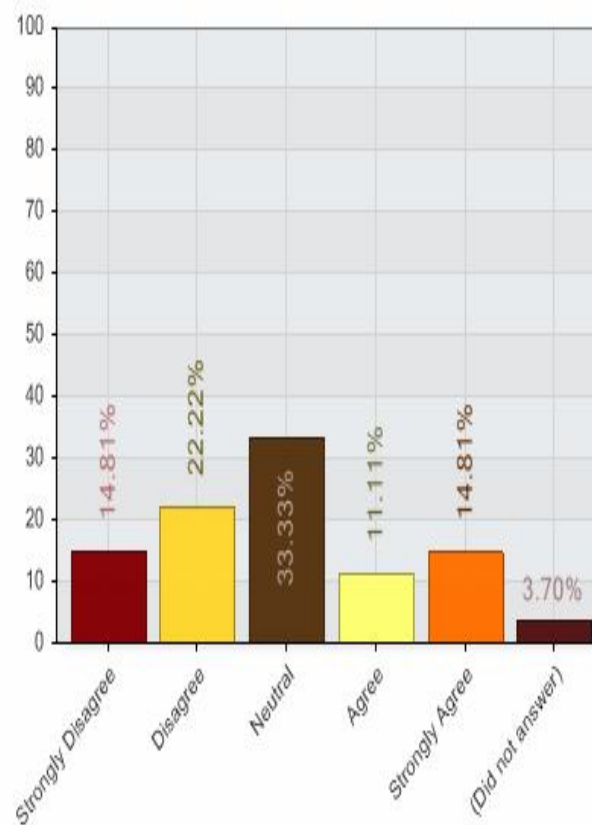


Freedom to Think!

Encouragement to 'think'



Freedom to give 'funny' ideas'



Make your people think? Give them time!

@Accelper 2009

Time and Place to Think!



www.Google.com

@Accelper 2009

Making Innovation Predictive

HOW?

The background of the slide features a collage of US dollar bills, including \$100 and \$10 bills, overlaid with a green line graph that trends upwards from left to right.

Business Innovation Index

| Measures | Company Data | Company Goals | Company Score | Weighted Score |
|--|---|---|--------------------------|------------------|
| CEO Recognition for exceptional value creation | Number of employees recognized = 2 | 5 employees recognized per month | $=(2/5)*100$ = 40% | $=.3*40$ = 12 |
| Number of innovative ideas per employee | Number of ideas for the month = 40 | 1000 ideas per month | $=(40/1000)*100$ = 4% | $.4*4$ = 1.6 |
| Revenue Growth (% of sales for innovation) | \$1M for innovative solutions | \$2M revenue for new products | $=(1/2)*100$ = 50% | $.3*50$ = 15 |
| Business Innovation Index (BIN) | | | | 28.6% |

Return on Innovation

| <i>BW Top Ten</i> | <i>Ranking</i> | <i>Most (RGxPG)</i> | <i>Best (\$)</i> | <i>ROI (\$)</i> | <i>\$ / year</i> |
|--------------------|----------------|---------------------|------------------|-----------------|------------------|
| <i>Apple</i> | <i>1</i> | <i>Google</i> | <i>Google</i> | <i>2.85</i> | <i>.71</i> |
| <i>Google</i> | <i>2</i> | <i>Apple</i> | <i>Dell</i> | <i>2.83</i> | <i>.71</i> |
| <i>Toyota</i> | <i>3</i> | <i>Genentech</i> | <i>Apple</i> | <i>2.04</i> | <i>.51</i> |
| <i>GE</i> | <i>4</i> | <i>Amazon</i> | <i>eBay</i> | <i>1.74</i> | <i>.44</i> |
| <i>Microsoft</i> | <i>5</i> | <i>eBay</i> | <i>Genentech</i> | <i>.83</i> | <i>.21</i> |
| <i>PnG</i> | <i>6</i> | <i>Motorola</i> | <i>3M</i> | <i>.60</i> | <i>.15</i> |
| <i>3m</i> | <i>7</i> | <i>Starbucks</i> | <i>Microsoft</i> | <i>.52</i> | <i>.13</i> |
| <i>Walt Disney</i> | <i>8</i> | <i>Boeing</i> | <i>Cisco</i> | <i>.51</i> | <i>.13</i> |
| <i>IBM</i> | <i>9</i> | <i>Walt Disney</i> | <i>Motorola</i> | <i>.41</i> | <i>.10</i> |
| <i>Sony</i> | <i>10</i> | <i>Dell</i> | <i>HP</i> | <i>.36</i> | <i>.09</i> |

Return on Innovation

What should be done?

Sustaining Profitable Growth

**Start before you
need to**

Invest in leadership development

**Appoint a senior
leader**

Educate managers in innovation

**Designate a team
of experts**

Capture key value growth ideas

Train the troops

Allocate resources for innovation

Develop new innovative solutions

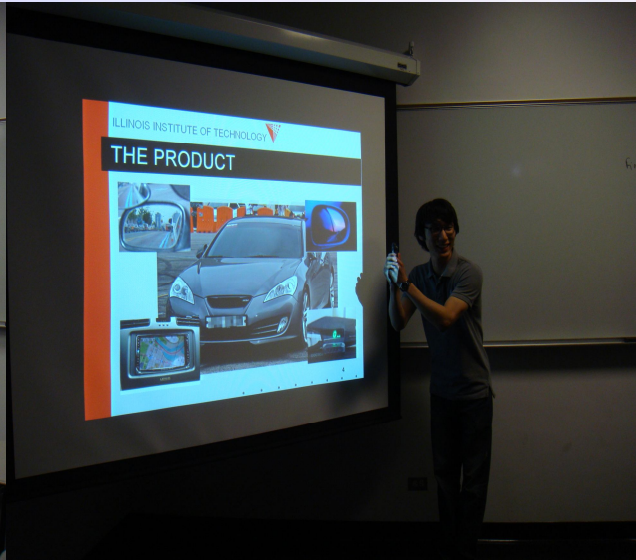
Monetize and
Institutionalize
Innovation

The Task at Hand

1. Your job is your business
2. Run like a business, not like a job
3. Information and technology are your competitive weapons
- 4. LEARN TO EXCEL AND INNOVATE**
5. Love and serve your customers
6. Create value-add services
7. Service your solutions
8. Sell, lead, and enjoy!

The Innovation Class

(IIT Chicago)



Training Programs @ IIT

[IIT.EDU HOME](#)[PROSPECTIVE STUDENTS](#)[ALUMNI](#)[BUSINESS & INDUSTRY](#)[VISITORS](#)[APPLY NOW »](#)

Center for Professional
Development
Information Technology
& Management
Industrial Technology &
Management
Professional Learning

CENTER FOR PROFESSIONAL DEVELOPMENT

[Home / News & Events](#)

CPD HOME

About

People

Academic Programs

Research

News & Events

[News](#)

[News Archive](#)

[Events](#)

Business Innovation - Training and Certification

Welcome to the Business Innovator Certification launch. By learning to be more innovative and achieving the Business Innovator Certification you will gain the confidence in innovating solutions for personal and professional growth. In this knowledge age, innovation competency has become an evolving necessity at individual and corporate levels.

Given the state of the economy, and challenges faced by everyone, innovation skills will enable us to create new opportunities either as an entrepreneur or as an employee. In either case, we must maximize utilization of our intellectual resources.

The Business Innovation class offered at IIT, Chicago is an unparalleled course offering the participants a comprehensive approach to learning a reproducible methodology, from identifying an opportunity to monetizing a creative solution. After all, innovation is applied creativity.

Encouraged by exceptional feedback over six semesters of our Business Innovation Course ([IT 582](#)), we are launching our innovation programs for industry. The programs include:

[SC 824 Business Innovator Training and Certification \(Innovation for Professionals\)](#)

[SC 825 The T.E.D.O.C. Training \(Innovation for Managers\)](#)

[SC 826 Master Business Innovator Certification \(Train-the-Trainer in Innovation\)](#)

[SC 827 Innovation Overview for Executives \(Innovation for Executives\)](#)

The participant must pass the [Business Innovator Certification test](#) to become a certified Business Innovator or a certified Master Business Innovator.

Undergraduate
Admission

INQUIRE

Graduate
Admission

Business Innovator Certification

Certificate of Accomplishment

Peter Balbus

of Pragmaxis

**has successfully fulfilled theory and practice requirements for
Business Innovation, and thus be recognized as**

Certified Business Innovator



Praveen Gupta, President



Carl Vizza, IIT Director

Certificate Number _____

Issue Date _____

Business Innovation Conference



Business Innovator Certification

Thank you!

***"I believe creativity happens, but I also believe that Mr. Gupta has helped uncover a way to make innovation happen."
- Dipak Jain, Dean, Kellogg School of Management***

For more information, please contact

praveen@accelper.com

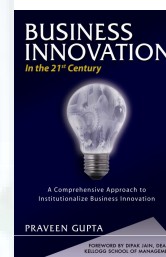
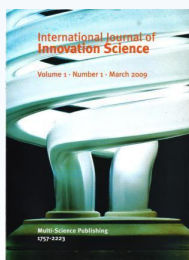
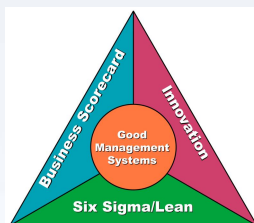
Toll Free: (800) 680-0700

Tel: (847) 884-1900

www.accelper.com

www.ibusinessinnovation.com

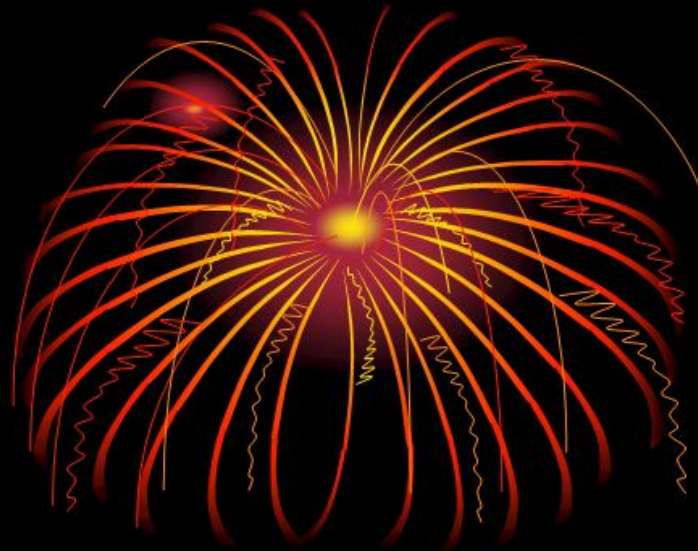
www.businessinnovationconference.com



Accelper

Innovation. Profitable Growth.

***Asking questions is critical for
becoming more innovative!***



Praveen Gupta



Praveen Gupta, a management consultant, has authored several books including Business Innovation in the 21st Century, Stat Free Six Sigma, Six Sigma Performance Handbook, and Service Scorecard. Praveen is Editor-in-Chief of International Journal of Innovation Science, and writes a monthly column Manufacturing Excellence in the Quality magazine. Praveen frequently speaks at conferences internationally.

Praveen has been recognized as a thought leader in areas of excellence and innovation. He has developed Six Sigma Business Scorecard, the 4P model of excellence, Breakthrough innovation, and Stat Free Six Sigma methods that have been translated and used worldwide.

Praveen, the founding president of Accelper Consulting (www.accelper.com), has worked at Motorola, and AT&T Bell Laboratories, and consulted with about 100 small to large size companies including CNA, Abbott Labs, Superior Essex, Dentsply, Hexel, Experian, Sloan Valves, Weber Markings, Wayne State (Ford), and Telular. Praveen taught Operations Management at DePaul University, and Business Innovation at Illinois Institute of Technology, Chicago. He has conducted seminars worldwide for over 20 years.

Accelper Consulting provides training and consulting services in the area of innovation, Six Sigma and business performance for achieving sustained profitable growth. Praveen can be contacted at praveen@accelper.com.