# What If 99% Of Knowledge Was Noise?



## Applying Systematic Innovation To the Knowledge Management Challenge

#### Darrell Mann



1) The high level of predictability of the future, and the strategic and risk management implications thereof

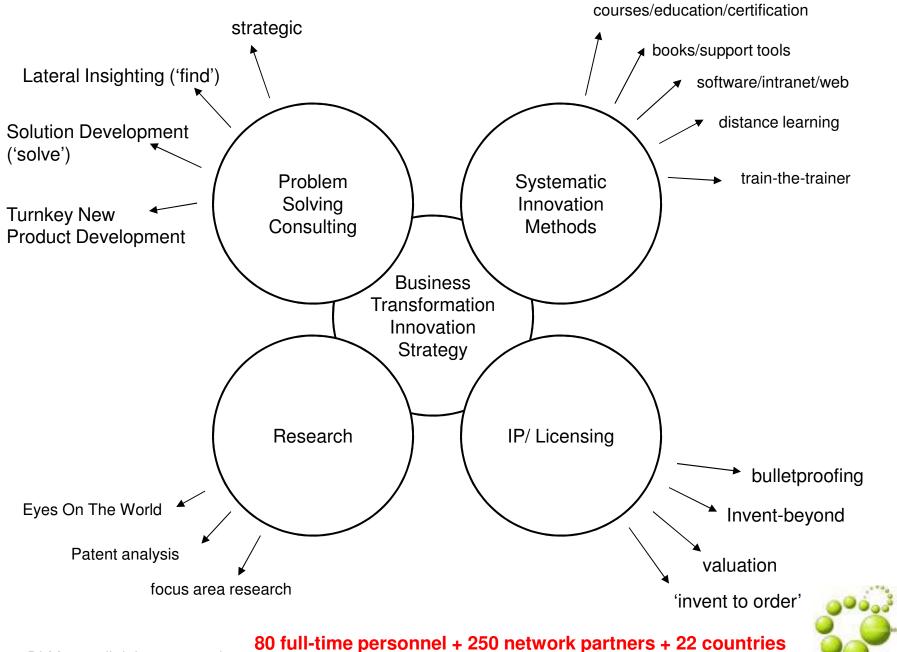
2) The importance of being able to value intangible assets and integrate them into the business strategy

*3)* The importance of fostering a culture of change and innovation

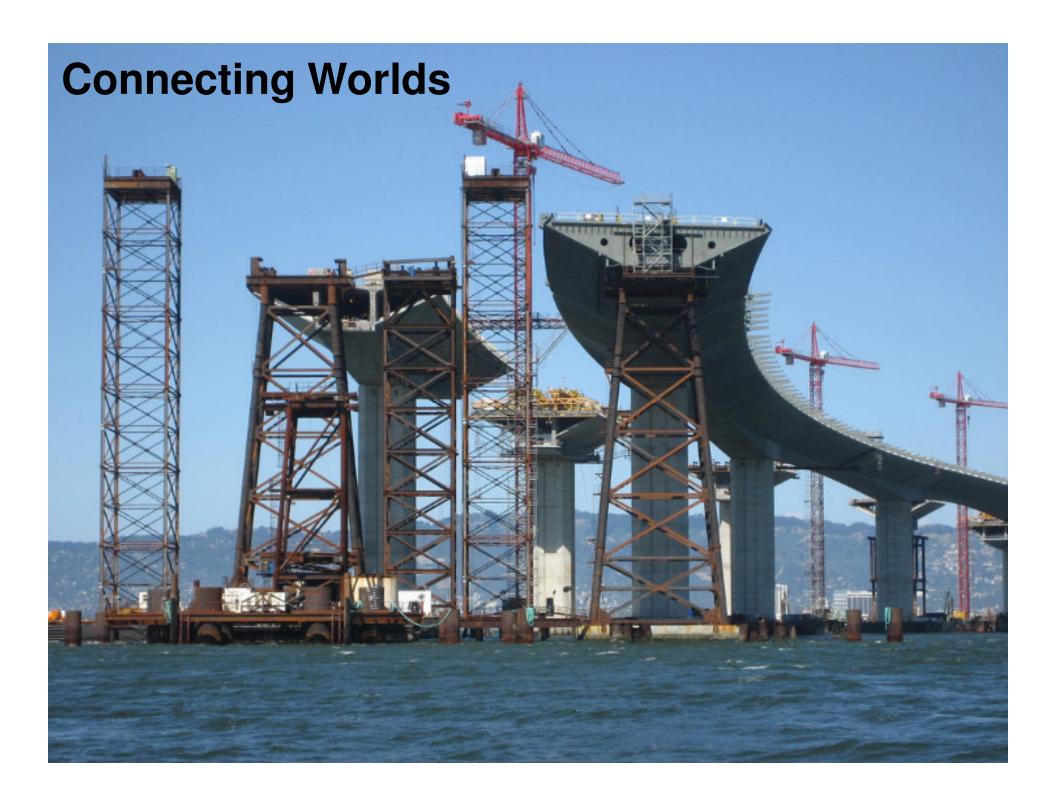
4) What If 99% Of Knowledge Was Noise?: Applying Systematic Innovation To the Knowledge Management Challenge'



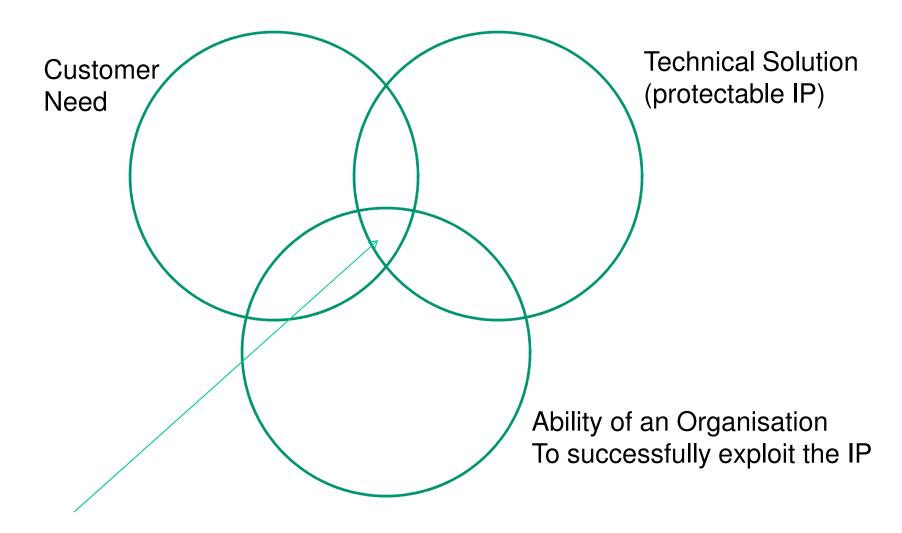
#### **Systematic Innovation - Overall Business Model**







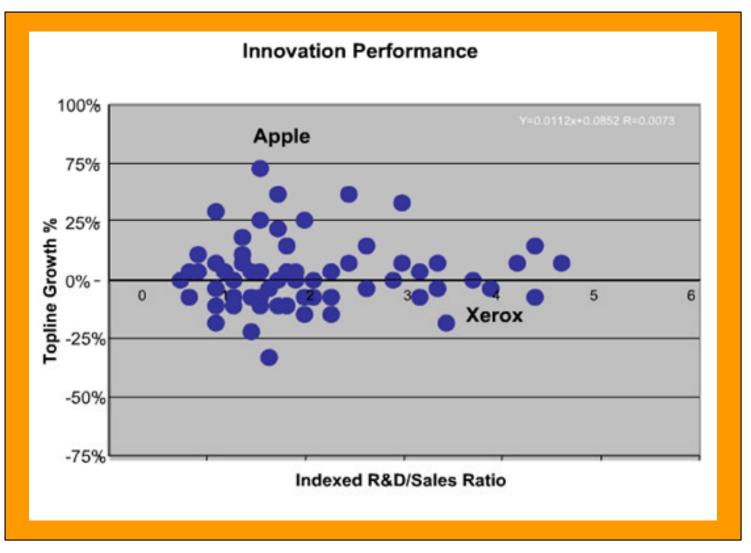
#### **Joined-Up Step-Change**



Only when all three are in place is there an opportunity for successful commercialisation

### "Wait for the next big thing"

#### **Innovation: What CEOs & Investors See**

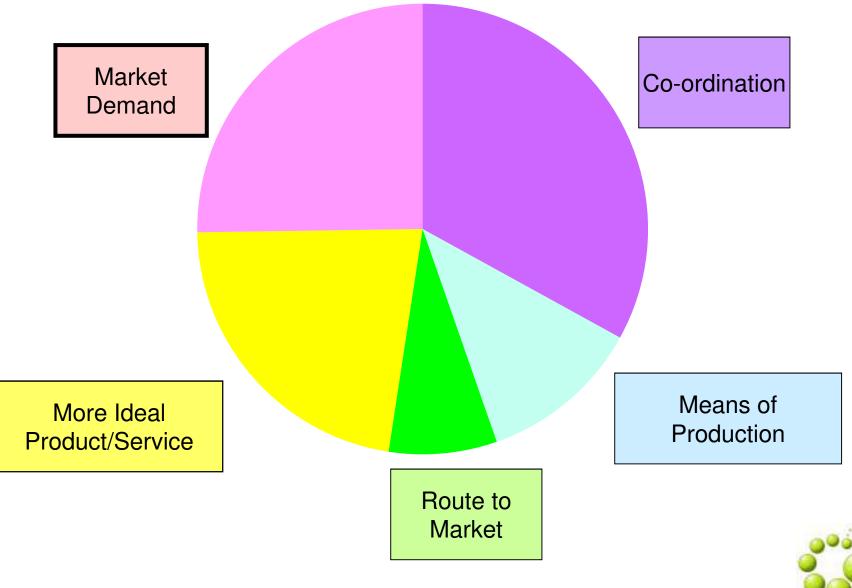




#### 6 0 82 15 19

A successful change initiative is about as likely as picking the right number on a roulette wheel

#### **Where Failures Happen - MNCs**



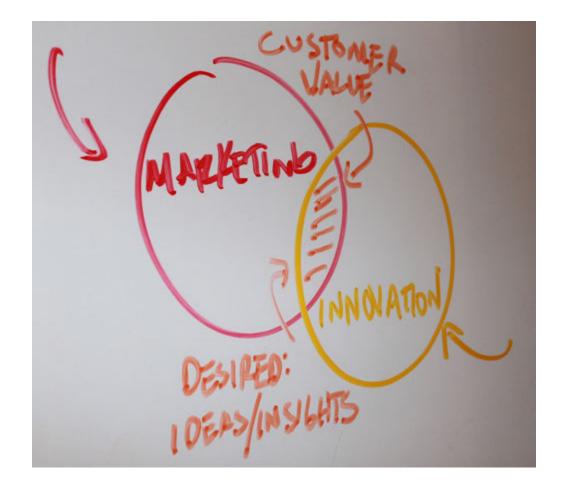
# Every business...

## ... is a COMPLEX system

# IT'S THE WHOLE THING KEEP IT SIMPLE, STUPID

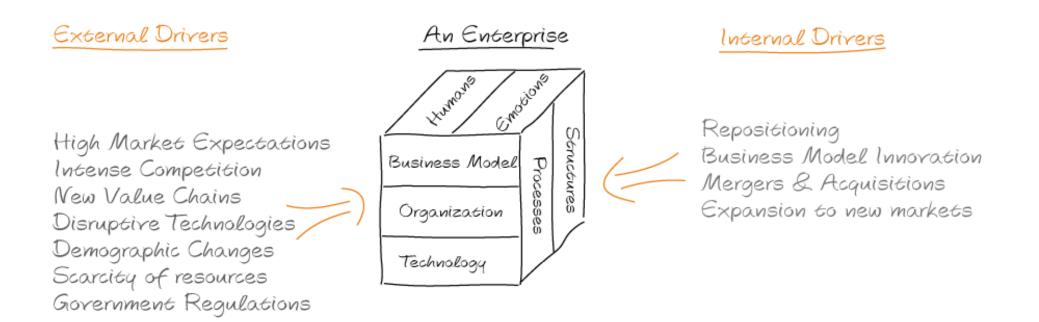
Every complex problem has a simple wrong answer *Niels Bohr* 





#### Business has only two basic functionsmarketing and innovation. **Peter Drucker**





Change is inevitable. Progress is not.

All *progress* is change, but *not* all change is *progress* 



Innovation: a commercially successful step change advance

(nothing to do with 'optimization')

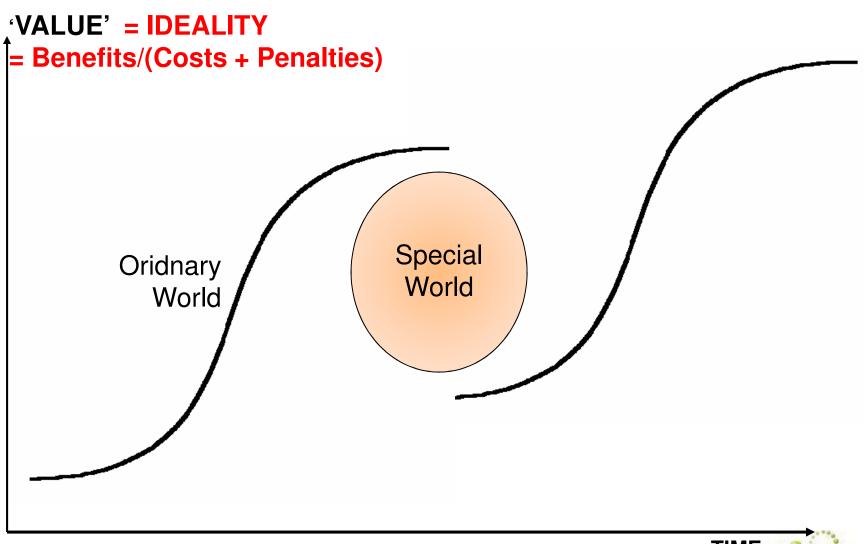
## Innovation

# Innovation = DOING THINGS BETTER

#### Innovation = **ACTION**xKNOWLEDGExCREATIVITY



#### Why Is Action x Knowledge x Creativity So Difficult?





#### ordinary world

#### special world

Everything's working Feels good Clear rules

Knowledge exists

Routine Boredom 'Sleeping' mind



Nothing seems to work Uncomfortable/horrible Confusion

Knowledge has to be found

Creativity

Excitement

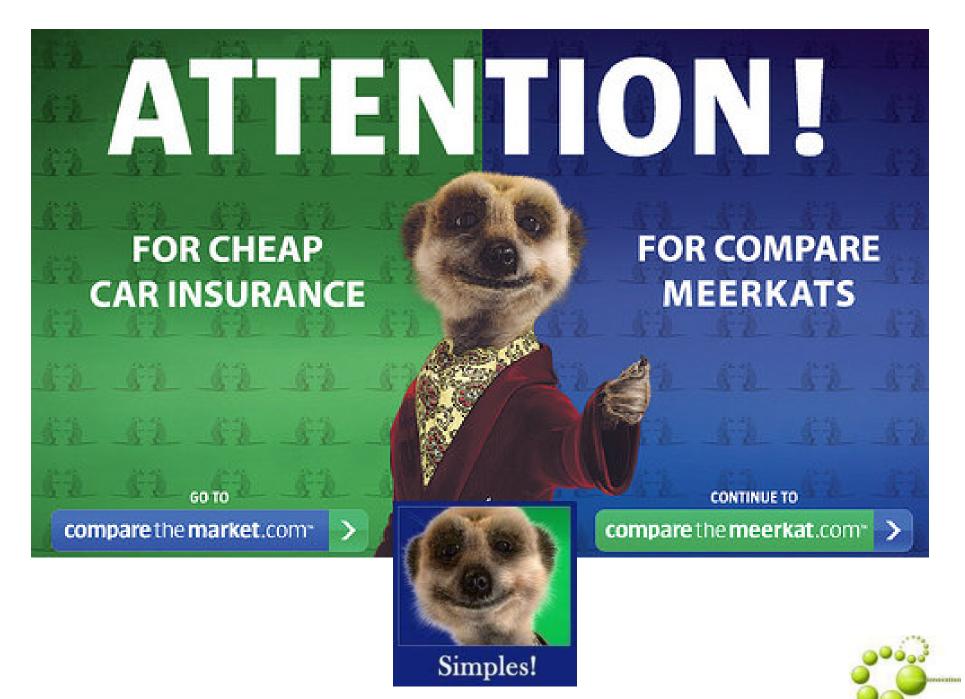
'Awoken' open mind





1975





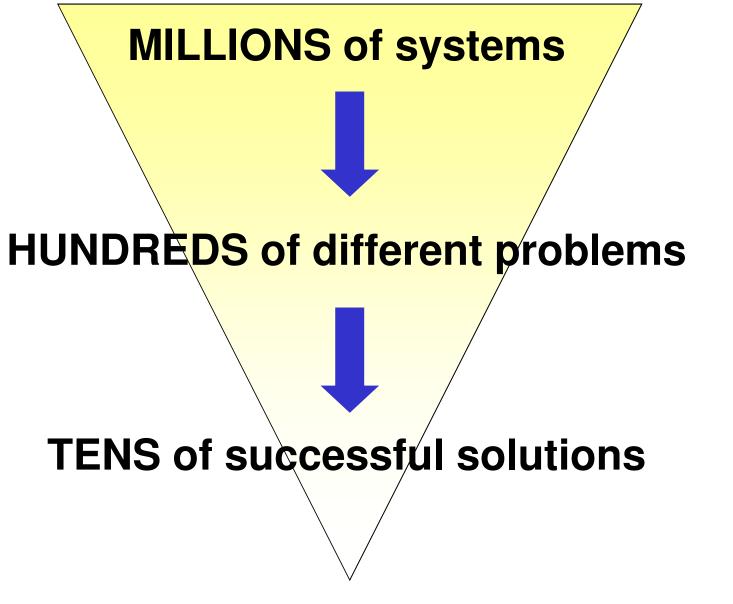
#### **'Bladeless Fan'**





every innovation has a unique story

#### each one is the same.



SOMEONE, SOMEWHERE ALREADY SOLVED YOUR PROBLEM

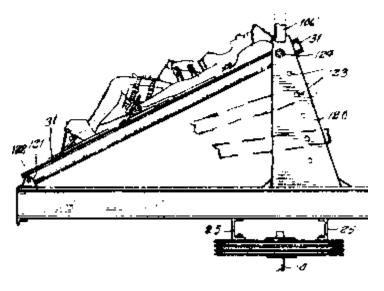
#### 'nothing new under the sun'...

# ...just a few billion ways to combine the things we know



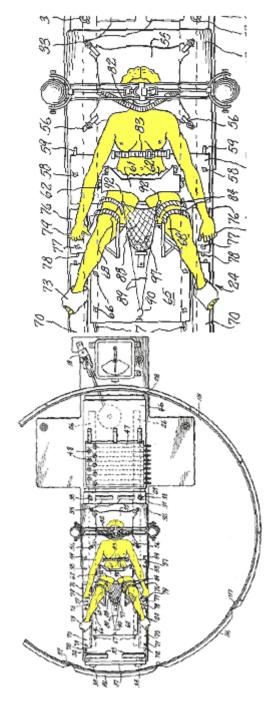


# Knowledge?



US Patent 3,216,423

# 'Centrifugal force accelerates baby'





#### Two And Three...

#### ...two ways to innovate:

New Function / deliver Function new way
Solve a Contradiction

#### ...three ways to generate:

- 1) FUNCTION database
- 2) CONTRADICTION database
- 3) EVOLUTION POTENTIAL database



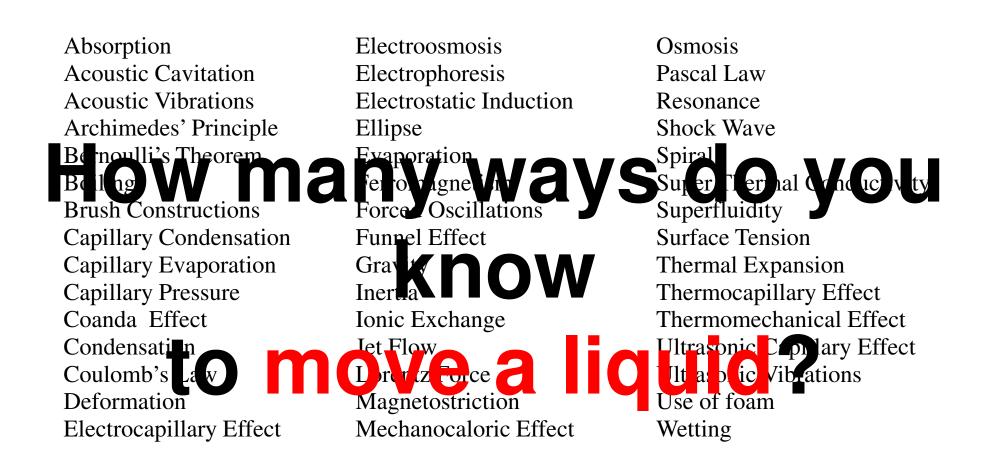
## Remove Water from glass

#### Without touching the glass





## **Knowledge from all fields**



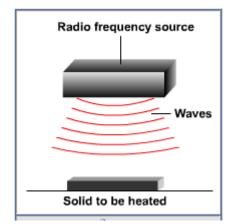


#### Other Means of Delivering The 'Heat Solid' Function

#### Radio frequency heating

Function:	Heats
State:	Solid

It is a process of heating materials through the application of radio waves of high frequencyheating uses electro-magnetic fields with wavelengths of 7.4 to 44.2 metres. This technology is u



#### www.systematic-innovation.com

#### Search Function:

Heats

📀 Solid 🌑 Liquid 🌑 Gas 🌑 Field 🚾

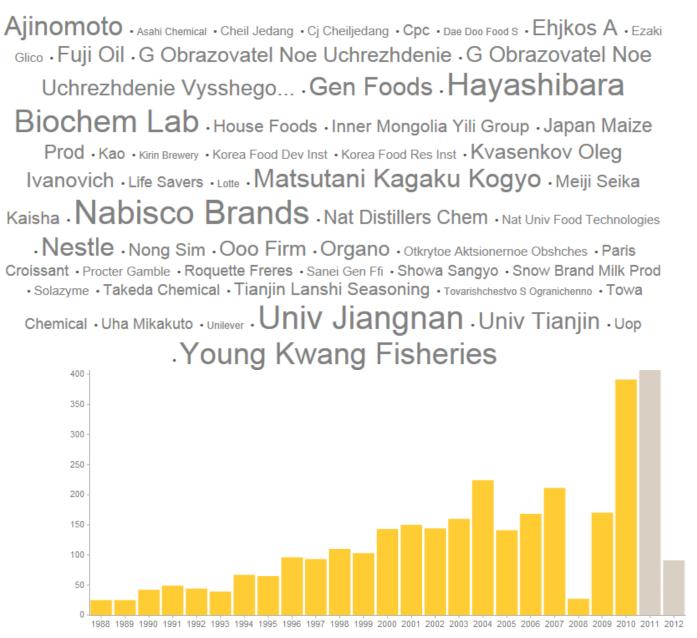
#### Search Found 20 Results

#### \* Air Impingement

- Combustion
- Condensation Heating
- Conduction
- Convection
- Eddy Current
- Exothermic Reactions
- Induction heating
- Infra red Heating
- ≻ Laser
- Light wave heating
- Microwave Radiation
- Peltier Effect
- Phase Changes
- Radiation
- Radio frequency heating
- Shunt Effect
- Solar Energy
- Strain Heating
- Ultrasonic Heating

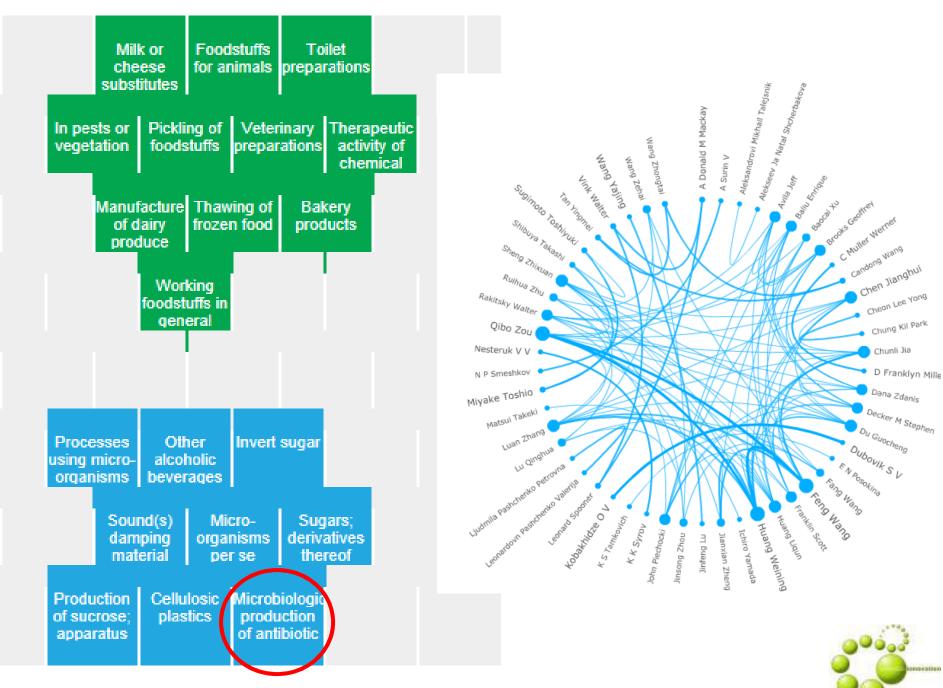


#### **Starch-Sugar Conversion**



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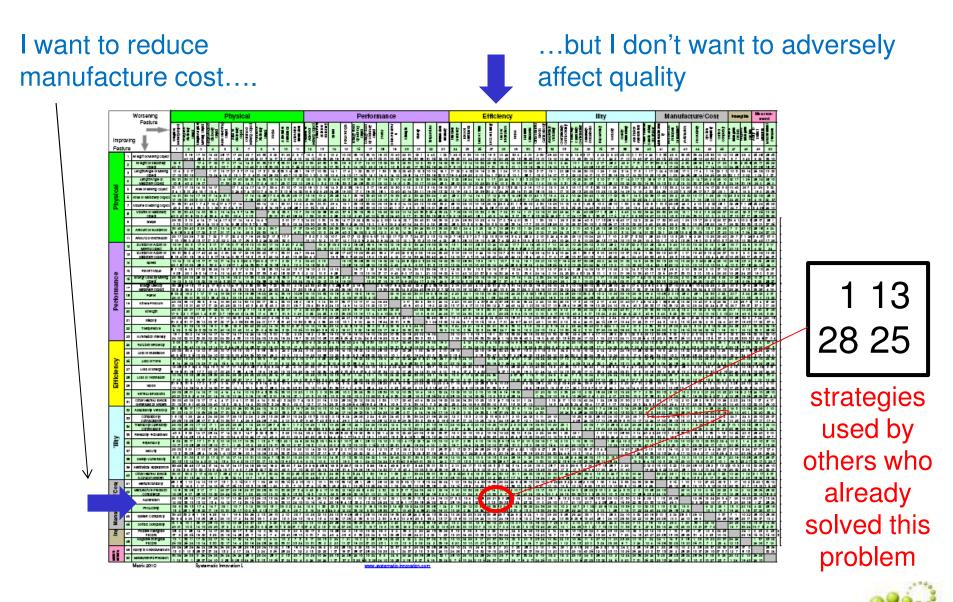


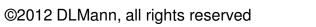


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We wish to reduce the cost of chicken feed BUT the nutritional value cannot be reduced

#### **Solutions Somewhere...**





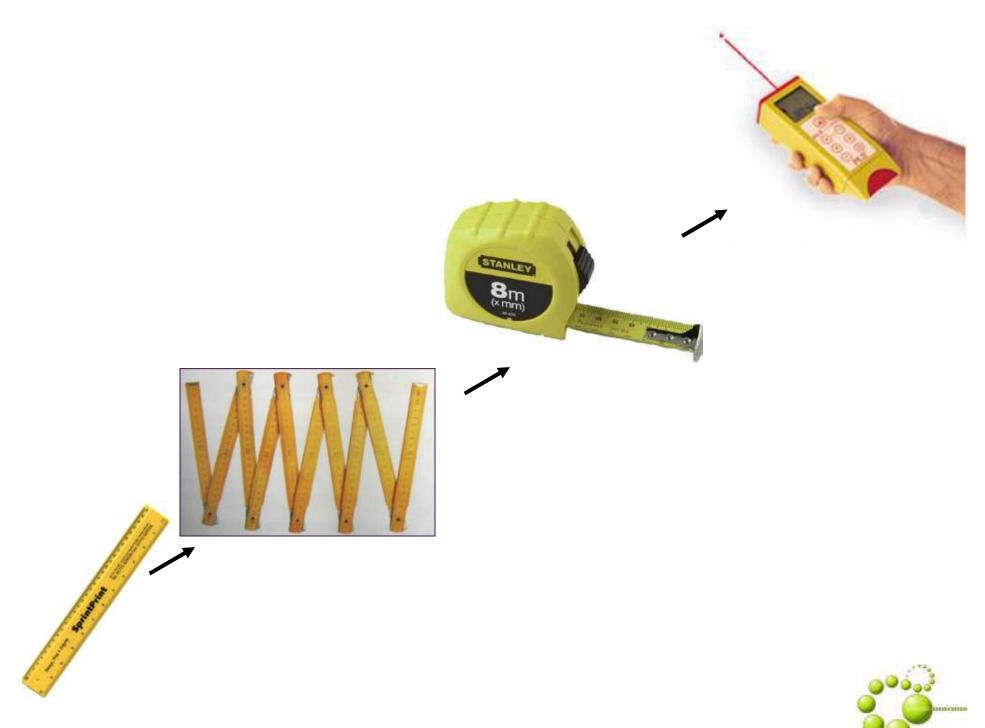
OUTCOME: 40% reduction in production cost 10% improvement in nutritional absorption

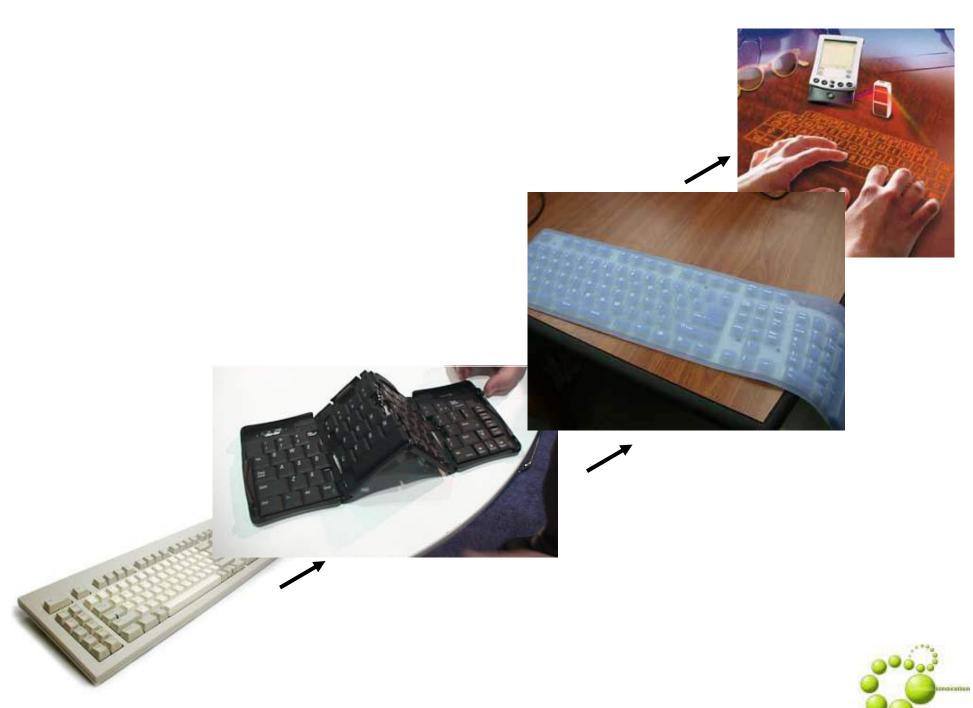
#### Looking For Patterns:











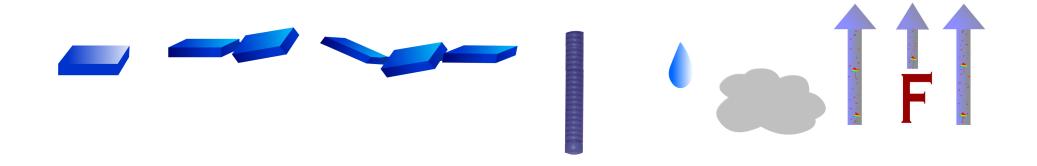








#### **Trend : Dynamization**



#### Immobile Single Joint

Multiple Joint

Completely flexible

Liquid Gas

Field



# Innovation Capability Maturity Model







# **Innovation Capability Maturity Model**

Most innovation attempts fail because organisations: Ask the wrong questions, Mis-handle the communication with customers & stakeholders Try to fit things into their current silos and processes Give up too soon Deliver the wrong solutions

Reproducible innovation success comes from a step-wise journey:



SEEDING Problem Solving Skills



CHAMPIONING Persistence Skills



MANAGING



ng Win-Win Stakeholder Outcome Skills

STRATEGISING



VENTURING

Right Question Skills



Some Organisations Do Get It Right...



The Steve Jobs Effect/'insanely great'

'Beat Sony'/Institutionalised Innovation Tools

40% product turn every 3 years



Skunkworks





'50% of innovations from the consumer'

Average 40 suggestions/employee/yr







Employees spend 30% of time on 'non'Google'

'Self-organising' teams

90+% implementation rate

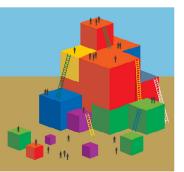


## Look Beneath The Noise....





CHAMPIONING



MANAGING



STRATEGISING



VENTURING







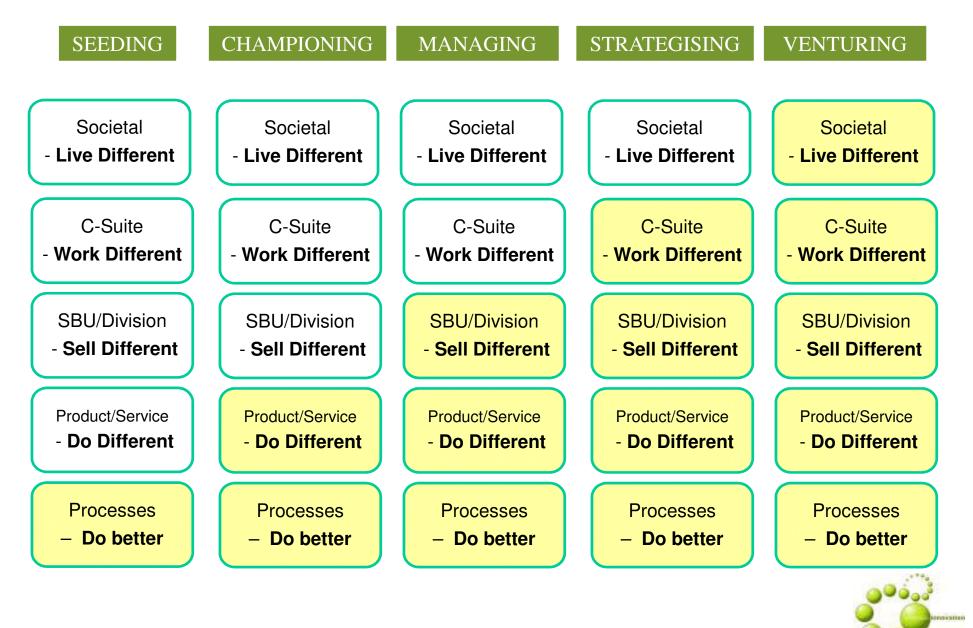






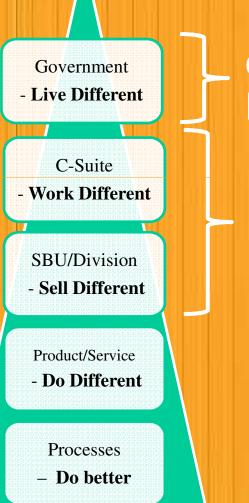


# **Level Of Capability Determines Level Of Focus**



# Different Types Of Innovation





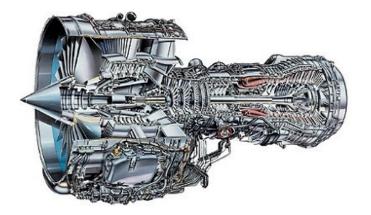
...and eventually here ...without

innovating here

#### Level Of Capability Determines Ability To Handle Complexity

SEEDING CHAMPIONING MANAGING

#### COMPLICATED



"The" root cause

Known rules of behaviour

"If we keep doing what we've always done, we'll keep getting the same result"

COMPLEX

VENTURING

"conspiracy of causes"

**STRATEGISING** 

NO safe rules of behaviour

"If we keep doing what we've always done, we *might* get the same result"



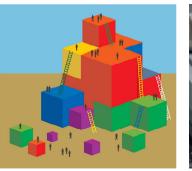
## **Relation To TRIZ/SI Tools....**







CHAMPIONING







STRATEGISING



VENTURING

VSM

RTTP

FAA	Contradictions	Root-	IFR	
Trimming	EvPot	Contradiction	FOS	
9-Windows	TrenDNA	ApolloSigma	FDM	
Subversion-	MCDA	QFD	Blue-Ocean	
Analysis	TOC	(ARIZ)	OI	
WWS				
Perception-				
Mapping				



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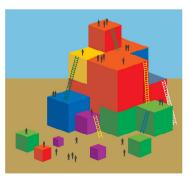
Principles

### **Relation To Books....**





C



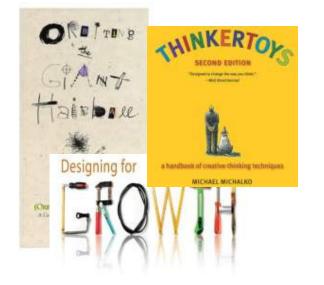
MANAGING



STRATEGISING



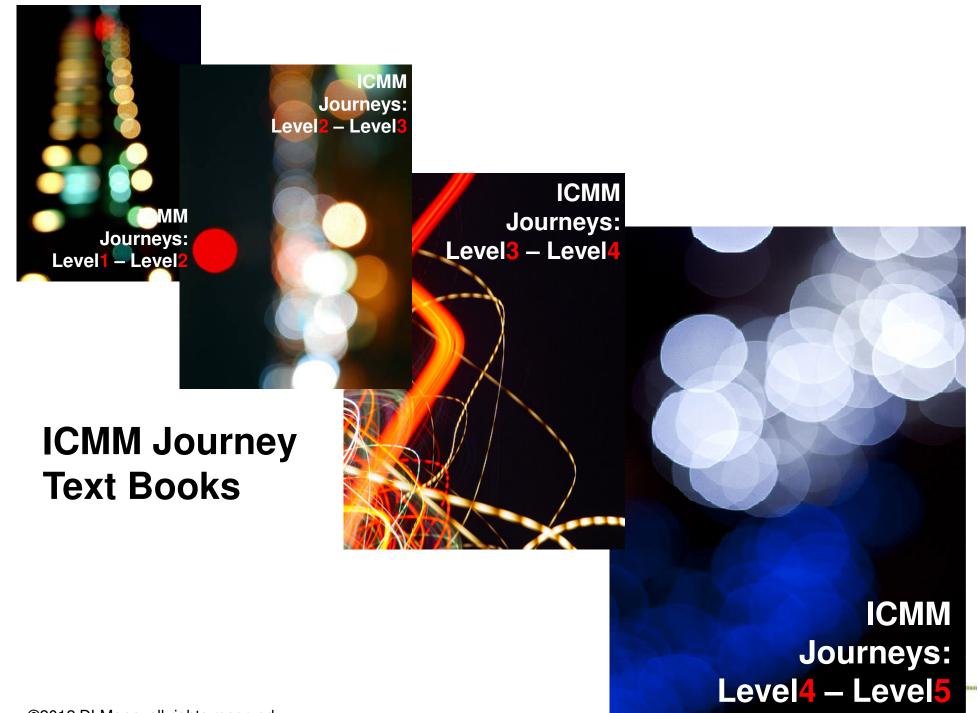
VENTURING



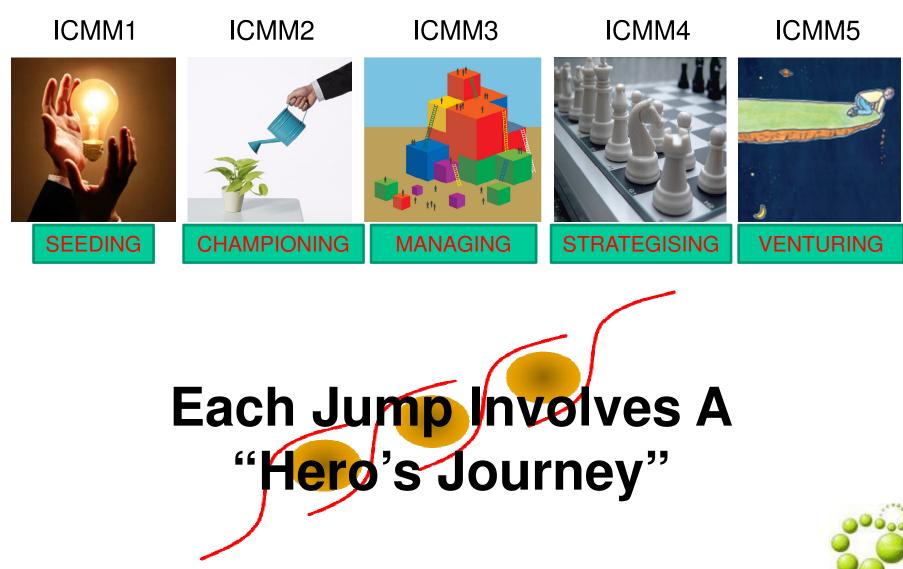
a design thinking tool kit for managers

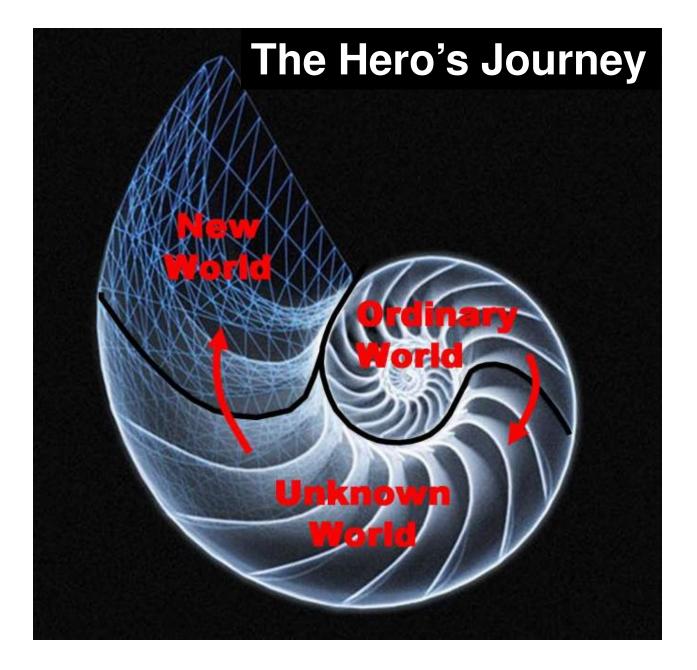
JEANNE LIEDTKA AND TIM OGILVIE



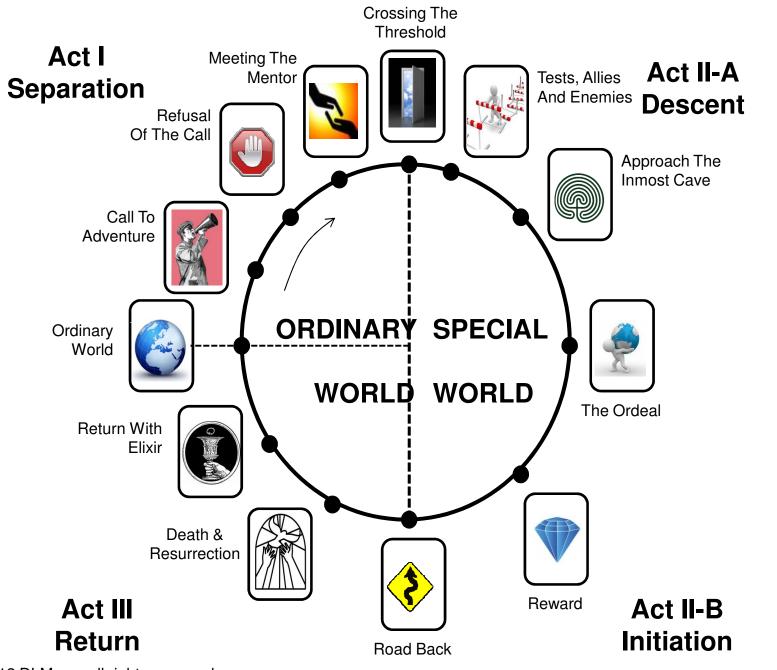


# **Innovation Capability Maturity Model**

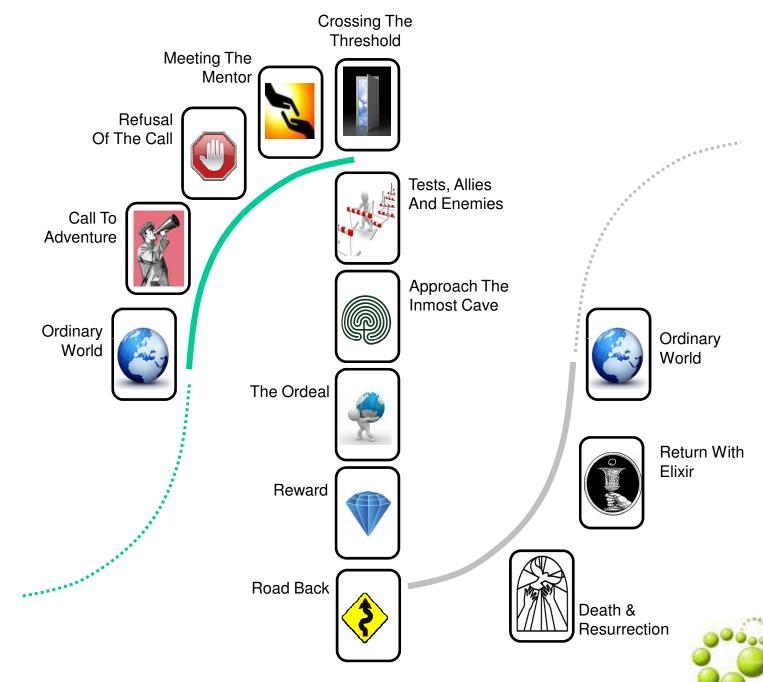












#### **Level 1-2 Main Contradiction**

We need to demonstrate innovation success



we have no innovation budget

# Change/Innovation Myths: Change Requires More Resources

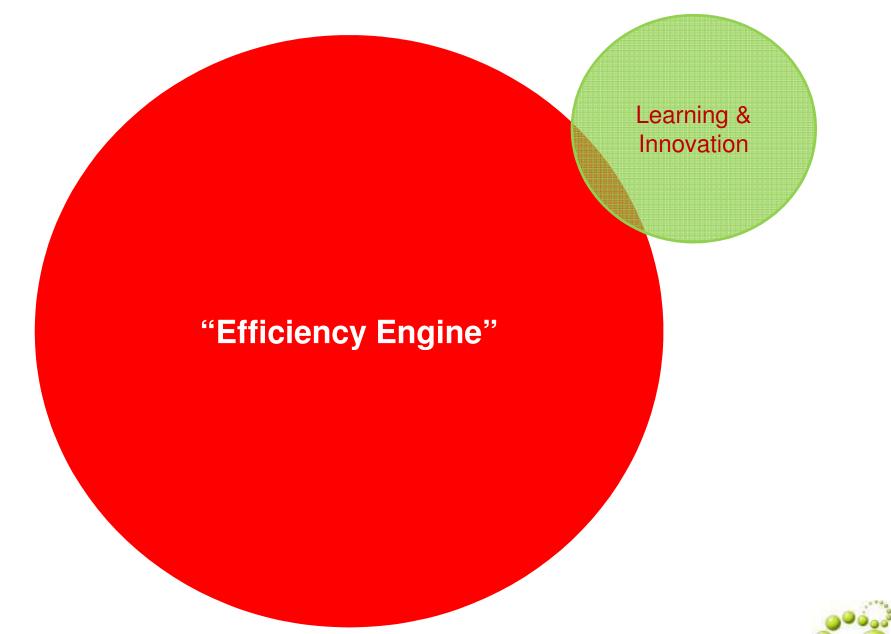














#### Level 2-3 Main Contradiction - 1

# We need to innovate



Work doesn't fit in with 'everyday' production activities

# Change/Innovation Myths: Creativity is unpredictable, different





### Level 2-3 Main Contradiction - 2

# We need to innovate



we get stuck at internal silo walls

#### Level 3-4 Main Contradiction - 1

We need step-change innovations



Need for data and 'proof' prevents progress

#### Level 3-4 Main Contradiction - 2

we need step-change innovations



domain experts deliver domainsolutions (need to 'unlearn')

# **The Right Solution: Separate CO<sub>2</sub>** & CH<sub>4</sub>

#### Ask a chemist and they will design this:

Reflux

Condenser

Acid,

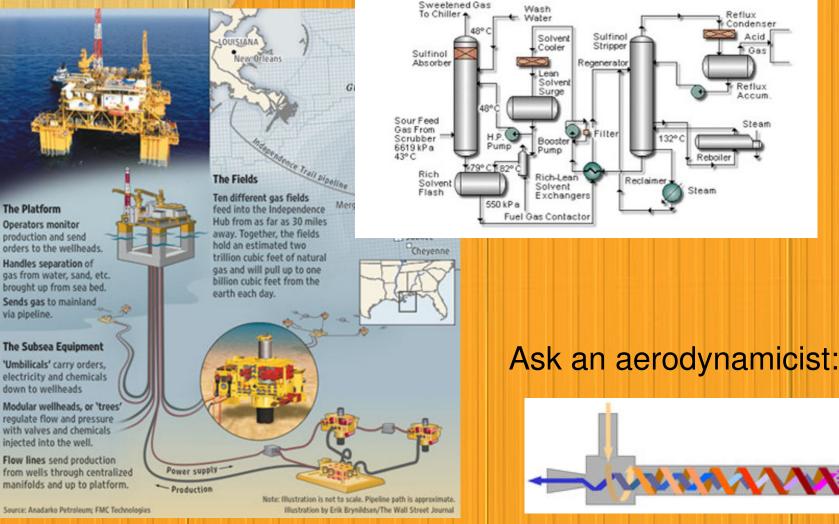
1 Gas

Reflux

Accum

Steam

Reboiler



### Level 3-4 Main Contradiction - 3

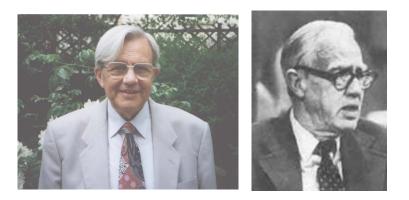
we need step-change innovations



fundamentally different skills needed at different project stages

# The World's Biggest Piece Of Psychology Research...



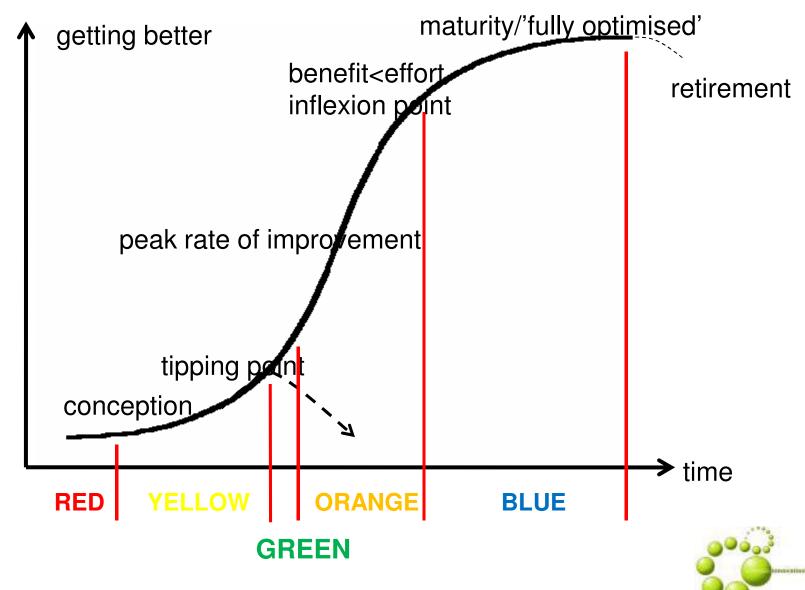


- \* 50+ years of research
- \* 500,000+ people analysed across every part of the world
- \* National thinking style profiles
- \* Established Industry Profiles
- \* 'Social System DNA'



Beige	1. Survival	newborn infant, Alzheimer's victim, shell-shock	
Purple	2. Tribal	gangs/tribal rituals/magic blood oath	
Red	3. Feudal	power gods/ego, feudal rule, heroic, predatory 'terrible two's' <i>('Express self impulsively at any cost')</i>	
Blue	4. Order	codes of conduct, hierarchy/order, 'moral majority' 'one right way' <i>('Deny/sacrifice self now for reward later')</i>	
Orange	5. Scientific	materialism, competitive, self-interest, 'nature tamed', MBO, winners/losers <i>('Express self for rationally self gain')</i>	
Green	6. Communitarian	'sensitive-self', deep ecology, 'politically correct' consensus, ('Deny self now to get acceptance now')	
Yellow	7. Holarchy	flexibility/adaptive, inter-dependence, co-opetition Win-Win, <i>('Express self with concern for others')</i>	
<b>Turquoise</b> ©2012 DLMann	8. Holistic	universal order, 'Theory of Everything', spiritual harmony	

# **Matching Mindset To Project Stage**



#### **Level 4-5 Main Contradiction**

we need step-change innovations in new markets

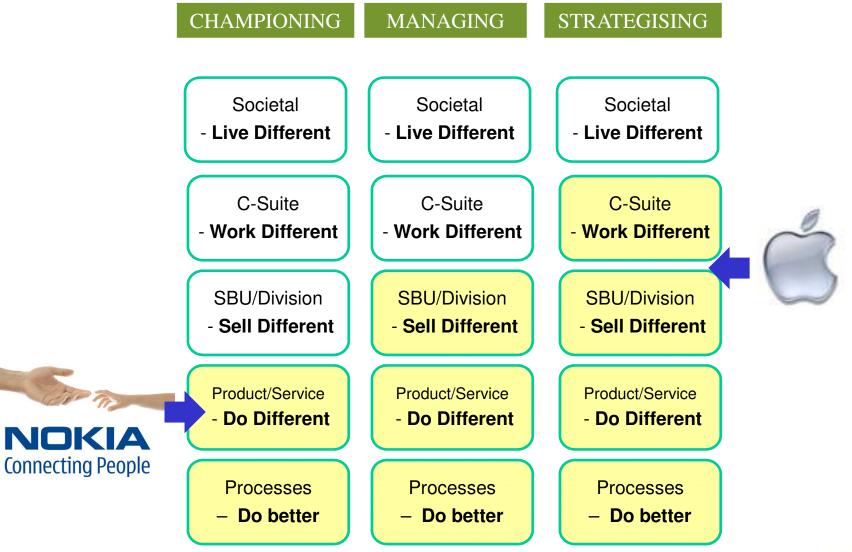


How to determine which markets are the most attractive?





# 'Eco-System' Innovation Capability





# http://systematic-innovation.com/survey.htm

#### **ICMM Level Questionnaire**

Please answer the following 25 questions with the opinion that is closest to you/your company philosophy.

#### \*1. Which of the following most closely matches our view of the role of leaders in the organisation?

- A: 'Do not follow where the path may lead. Go instead where there is no path and leave a trail.' Ralph Waldo Emerson
- B: 'To be able to lead others, a man must be willing to go forward alone.' Harry Truman
- 🔘 C: If your actions inspire others to dream more, learn more, do more and become more, you are a leader.' John Quincy Adams
- D: 'The leader has to be practical and a realist, yet must talk the language of the visionary and the idealist.' Eric Hoffer
- E: 'The task of the leader is to get his people from where they are to where they have not been.' Henry Kissinger



# **Innovation Capability Maturity Model**

#### Innovation strategy depends on the capabilities of the organisation



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