

# Enabling the Future

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# Creating 'Essential Value' in the resource constrained One Planet World

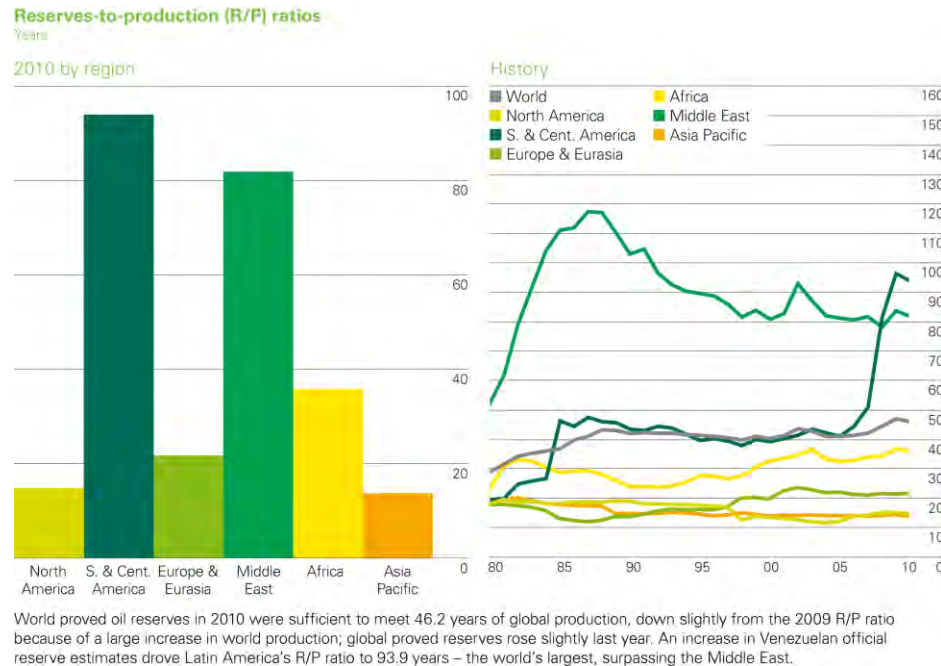
$$1 = P * C * R I$$

<http://bit.ly/hh3eU2>

# Vital to Remember

- ▶ This a Challenging Adventure, not an Impossible Challenge.
- ▶ Although Resources will be constrained.
- ▶ People will be
  - Plentiful
  - Creative
    - [http://www.ted.com/talks/ken\\_robinson\\_says\\_schools\\_kill\\_creativity.html](http://www.ted.com/talks/ken_robinson_says_schools_kill_creativity.html)
  - Ingenious
  - Enterprising
- ▶ Many enterprises will fail.
- ▶ But many can survive, be created and grow.

# Out of Easy Energy



“World oil reserves in 2010 were sufficient to meet 46.2 years of global production”

<http://www.bp.com/sectionbodycopy.do?categoryId=7500&contentId=7068481>

What about hoped for Global Demand?



# Out of your Element

1 <b>H</b> Hydrogen 1.01																	2 <b>He</b> Helium 4.00														
3 <b>Li</b> Lithium 6.94	4 <b>Be</b> Beryllium 9.01																	5 <b>B</b> Boron 10.81	6 <b>C</b> Carbon 12.01	7 <b>N</b> Nitrogen 14.01	8 <b>O</b> Oxygen 16.00	9 <b>F</b> Fluorine 19.00	10 <b>Ne</b> Neon 20.18								
11 <b>Na</b> Sodium 22.99	12 <b>Mg</b> Magnesium 24.31																	13 <b>Al</b> Aluminum 26.98	14 <b>Si</b> Silicon 28.09	15 <b>P</b> Phosphorus 30.97	16 <b>S</b> Sulfur 32.07	17 <b>Cl</b> Chlorine 35.45	18 <b>Ar</b> Argon 39.95								
19 <b>K</b> Potassium 39.10	20 <b>Ca</b> Calcium 40.08	21 <b>Sc</b> Scandium 44.96	22 <b>Ti</b> Titanium 47.87	23 <b>V</b> Vanadium 50.94	24 <b>Cr</b> Chromium 52.00	25 <b>Mn</b> Manganese 54.94	26 <b>Fe</b> Iron 55.85	27 <b>Co</b> Cobalt 58.93	28 <b>Ni</b> Nickel 58.69	29 <b>Cu</b> Copper 63.55	30 <b>Zn</b> Zinc 65.38	31 <b>Ga</b> Gallium 69.72	32 <b>Ge</b> Germanium 72.64	33 <b>As</b> Arsenic 74.92	34 <b>Se</b> Selenium 78.96	35 <b>Br</b> Bromine 79.90	36 <b>Kr</b> Krypton 83.80														
37 <b>Rb</b> Rubidium 85.47	38 <b>Sr</b> Strontium 87.62	39 <b>Y</b> Yttrium 88.91	40 <b>Zr</b> Zirconium 91.22	41 <b>Nb</b> Niobium 92.91	42 <b>Mo</b> Molybdenum 95.94	43 <b>Tc</b> Technetium (98)	44 <b>Ru</b> Ruthenium 101.07	45 <b>Rh</b> Rhodium 102.91	46 <b>Pd</b> Palladium 106.42	47 <b>Ag</b> Silver 107.87	48 <b>Cd</b> Cadmium 112.41	49 <b>In</b> Indium 114.82	50 <b>Sn</b> Tin 118.71	51 <b>Sb</b> Antimony 121.76	52 <b>Te</b> Tellurium 127.60	53 <b>I</b> Iodine 126.90	54 <b>Xe</b> Xenon 131.29														
55 <b>Cs</b> Cesium 132.91	56 <b>Ba</b> Barium 137.33	57 <b>La</b> Lanthanum 138.91	72 <b>Hf</b> Hafnium 178.49	73 <b>Ta</b> Tantalum 180.95	74 <b>W</b> Tungsten 183.84	75 <b>Re</b> Rhenium 186.21	76 <b>Os</b> Osmium 190.23	77 <b>Ir</b> Iridium 192.22	78 <b>Pt</b> Platinum 195.08	79 <b>Au</b> Gold 196.97	80 <b>Hg</b> Mercury 200.59	81 <b>Tl</b> Thallium 204.38	82 <b>Pb</b> Lead 207.2	83 <b>Bi</b> Bismuth 208.98	84 <b>Po</b> Polonium (209)	85 <b>At</b> Astatine (210)	86 <b>Rn</b> Radon (222)														
87 <b>Fr</b> Francium (223)	88 <b>Ra</b> Radium (226)	89 <b>Ac</b> Actinium (227)	104 <b>Rf</b> Rutherfordium (261)	105 <b>Db</b> Dubnium (262)	106 <b>Sg</b> Seaborgium (266)	107 <b>Bh</b> Bohrium (264)	108 <b>Hs</b> Hassium (277)	109 <b>Mt</b> Meitnerium (268)																							
																		90 <b>Ce</b> Cerium 140.12	91 <b>Pr</b> Praseodymium 140.91	92 <b>Nd</b> Neodymium 144.24	93 <b>Pm</b> Promethium (145)	94 <b>Sm</b> Samarium 150.36	95 <b>Eu</b> Europium 151.96	96 <b>Gd</b> Gadolinium 157.25	97 <b>Tb</b> Terbium 158.93	98 <b>Dy</b> Dysprosium 162.50	99 <b>Ho</b> Holmium 164.93	100 <b>Er</b> Erbium 167.26	101 <b>Tm</b> Thulium 168.93	102 <b>Yb</b> Ytterbium 173.05	103 <b>Lu</b> Lutetium 174.97
																		90 <b>Th</b> Thorium 232.04	91 <b>Pa</b> Protactinium 231.04	92 <b>U</b> Uranium 238.03	93 <b>Np</b> Neptunium (237)	94 <b>Pu</b> Plutonium (244)	95 <b>Am</b> Americium (243)	96 <b>Cm</b> Curium (247)	97 <b>Bk</b> Berkelium (247)	98 <b>Cf</b> Californium (251)	99 <b>Es</b> Einsteinium (252)	100 <b>Fm</b> Fermium (257)	101 <b>Md</b> Mendelevium (258)	102 <b>No</b> Nobelium (259)	103 <b>Lr</b> Lawrencium (262)

<http://www.aps.org/units/fps/newsletters/201107/jaffe.cfm>

# Resource Preparedness Order

## Section 103c

“Be prepared, in the event of a potential threat to the security of the United States, to take actions necessary to ensure the availability of adequate resources and production capability, including services and critical technology, for national defense requirements”

<http://www.whitehouse.gov/the-press-office/2012/03/16/executive-order-national-defense-resources-preparedness>



# The Circular Economy

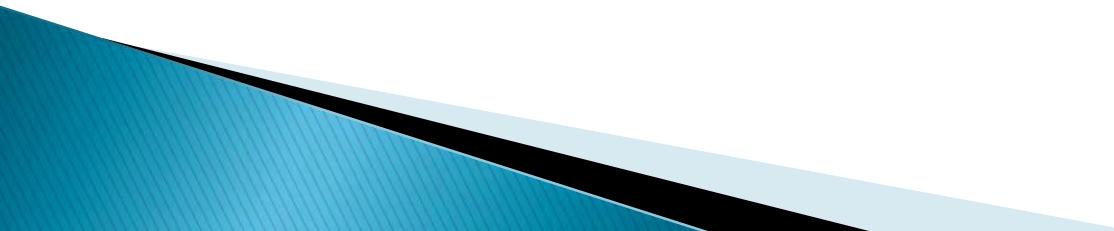
- ▶ For foreign producers, China's success in the Circular Economy effort would set a new level for competitiveness in the world economy.

<http://www.indigodev.com/Circular1.html>



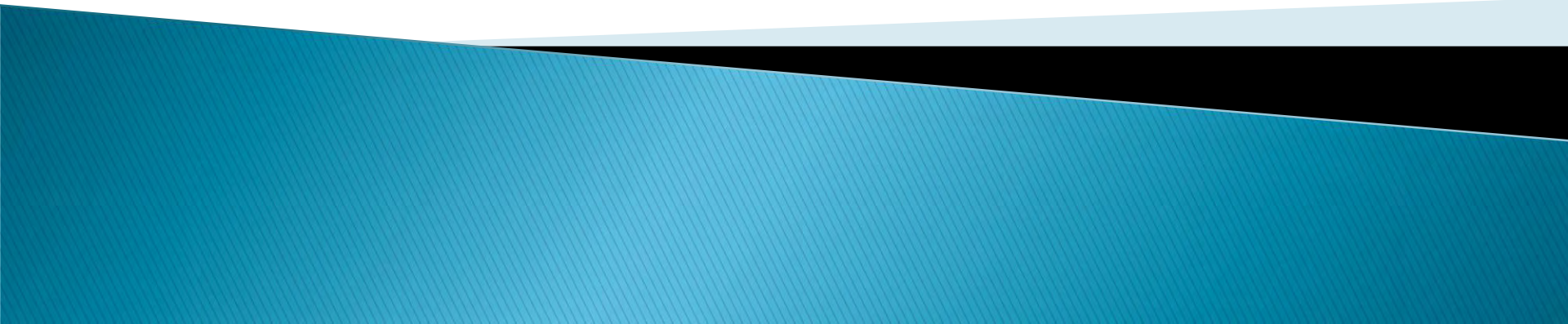
<http://vimeo.com/2362082>

# Contract and Converge

- ▶ At core is our need to contract and converge; how can we creatively match the energy and Resource Intensity of SystemUK to the affordable energy and other resources available to us as a society to give a sustainable 'Quality of Life'.
  - ▶ Critically it is not only about technologies but also about how we 'organise' ourselves as a society and businesses to continually reduce the Resource Intensity of the 'essential' services we enjoy.
- 




# Managing for Future Competitive Advantage



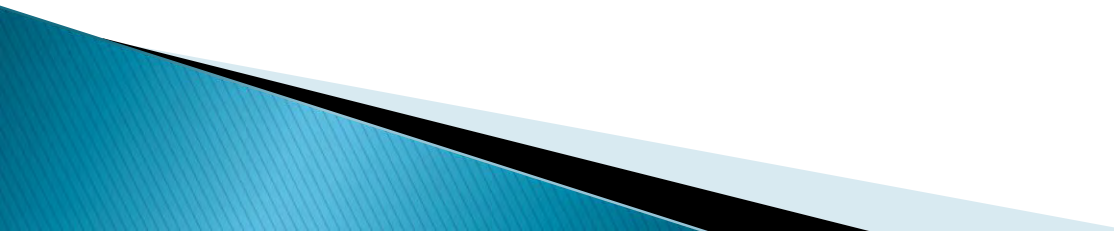
# Resource Constraints

- ▶ We have to recognise that as we move forward from this point we will face the following.
  - Energy, water and other resources will be constrained
  - Human resources will be plentiful
- ▶ The fact that human resources will be plentiful can be viewed both negatively and positively.
- ▶ These constraints lead inevitably to the following conclusions –


# We Cannot

- ▶ Create growth faster than we can reduce Resource Intensity (RI).
  - ▶ Waste or ineffectively invest resources.
  - ▶ Freely transport resources or goods.
  - ▶ Use a linear system of creation, use and disposal.
  - ▶ Keep creating products and services that allow unlimited forms of self-actualization.
  - ▶ Invest in inflexible technology, infrastructure and buildings.
  - ▶ Design for obsolescence.
  - ▶ Use Energy and water wantonly and ineffectively.
- 

# Tomorrow's Organisations

- ▶ Depend on their abilities to continually transform what they do and how they do it.
  - ▶ And to achieve this they need a regeneration of the mindset that led them to this point in time.
  - ▶ They must have the ability to think beyond the boundaries of the organisation to the wider system.
  - ▶ And seek to attain their organisational outcomes at continually reducing Resource Intensity.
- 

# Managing for the Future

- ▶ Successful organisations will maintain or increase the **Essential Value Created on Resources Invested** by
    - Satisfying emotional and spiritual need rather than gratuitous wants – self-actualisation
    - Satisfying essential needs in the lower orders of Maslow's Pyramid
    - Employing people rather than energy
    - Creating or using renewable energy and other resources
    - Minimising water use or creating the technologies that do
    - Creating and deploying climate stabilising and mitigation technologies
    - Being increasingly local
    - Providing a service rather than a product
    - Practicing lifecycle stewardship of their resources
    - Managing value rather than cost
- 



# Resource Intensity, $1 = P * C * RI$

- ▶ We can say that Resource Intensity is the Resource use per person per unit of ‘essential’ value created.
- ▶ And we can state the ‘First Law of Sustainability’ as
  - “In a resource constrained environment, goods and services can only grow at the rate at which we can reduce Resource Intensity”.
- ▶ By definition, any product or process that doesn’t add ‘essential’ value has infinite Resource Intensity.
- ▶ This defines your Business Strategy. <http://bit.ly/GDxLOZ>

# Essential Value & Effectiveness



Highways agency removing  
Lights from the Motorway  
System.

<http://bit.ly/xo3Pma>

Young People moving from  
the Car to the Internet.

<http://nyti.ms/GOu1p6>



# Forget the Past 20 years

- ▶ The future is not 'Green' or 'Sustainable' when formulating your Business Strategy and Action Plans.
- ▶ It is about continual improvement and the 'Quality' of what you do.
- ▶ You are on a Sustainable Development journey of continual improvement towards perfect Quality.
- ▶ Deming laid out 14 points and the first one was
  - "Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs". <http://bit.ly/eP5hap>
- ▶ He also said "Survival is not Compulsory".

<http://bit.ly/GDwXGK>

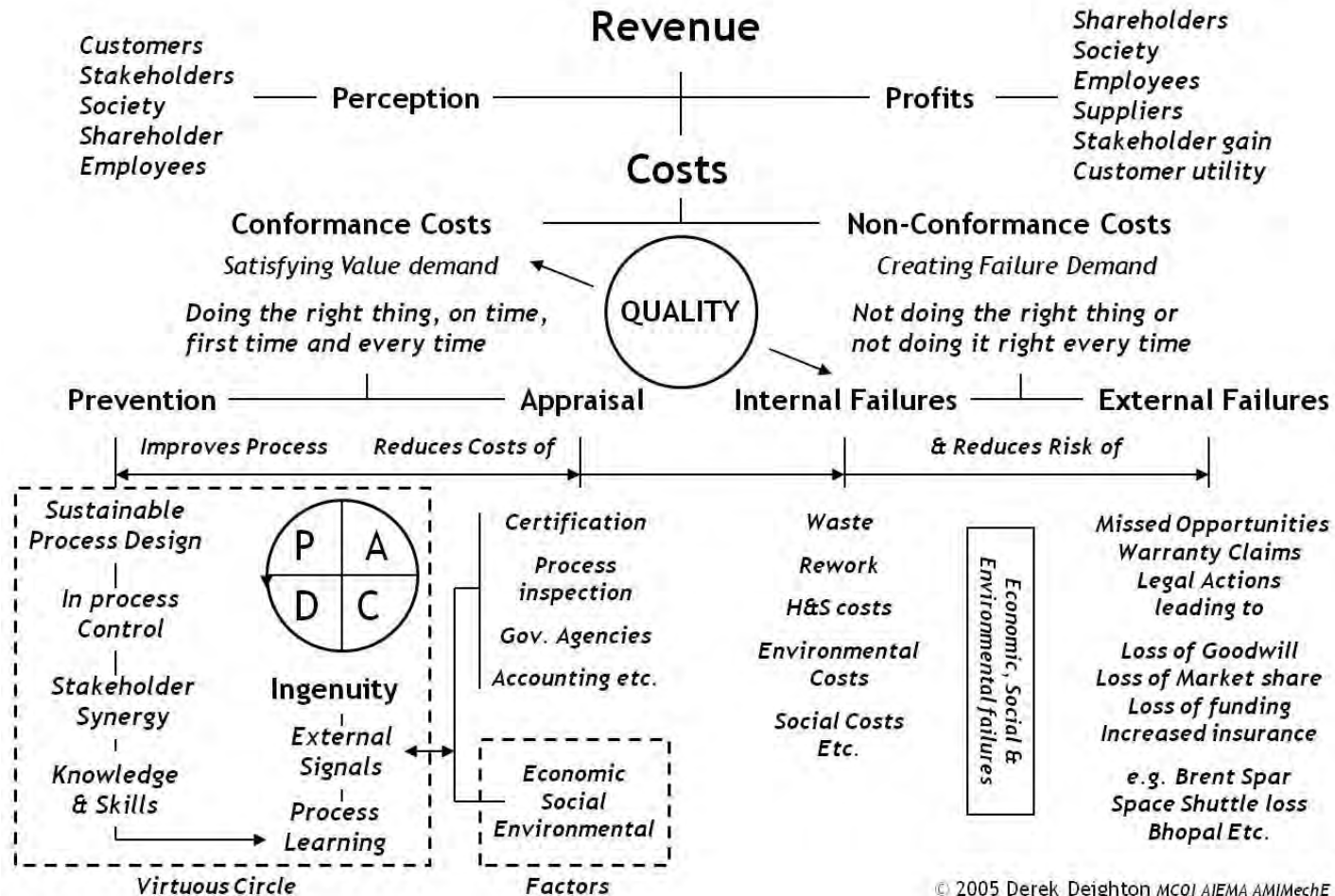
# QUEST ~ Interface Carpets

- ▶ QUEST program -- Quality Utilizing Employee Suggestions and Teamwork
  - Process relied heavily on frameworks of organizational learning -- team learning, systems thinking and shared dialogue.
  - Seeking solutions that may not drive business results this quarter, but often become the basis of our future success.
  - Ultimately, Interface believes Organizational Learning is a mindset – it's the pathway to 2020 and beyond.
  - Feedback collected to date indicates that we need to become better communicators, collaborators and learners, not just within our global business, but in partnership with external stakeholders.

<http://bit.ly/GLAOS7>

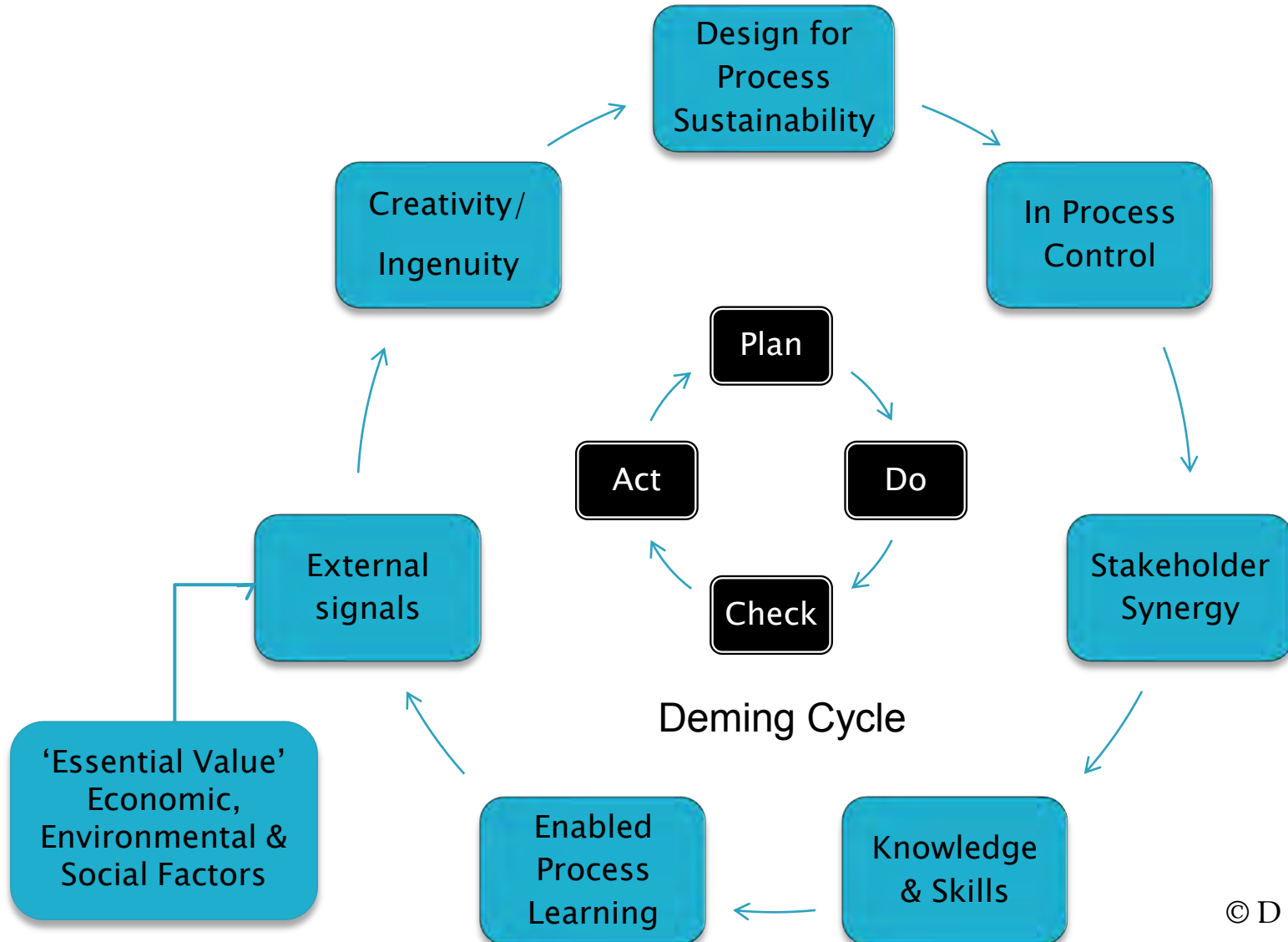
# Quality & Organisational Sustainability

Quality maximises the essential value added to society that results from the creation, use and disposal of products and services  
(at decreasing resource intensity)

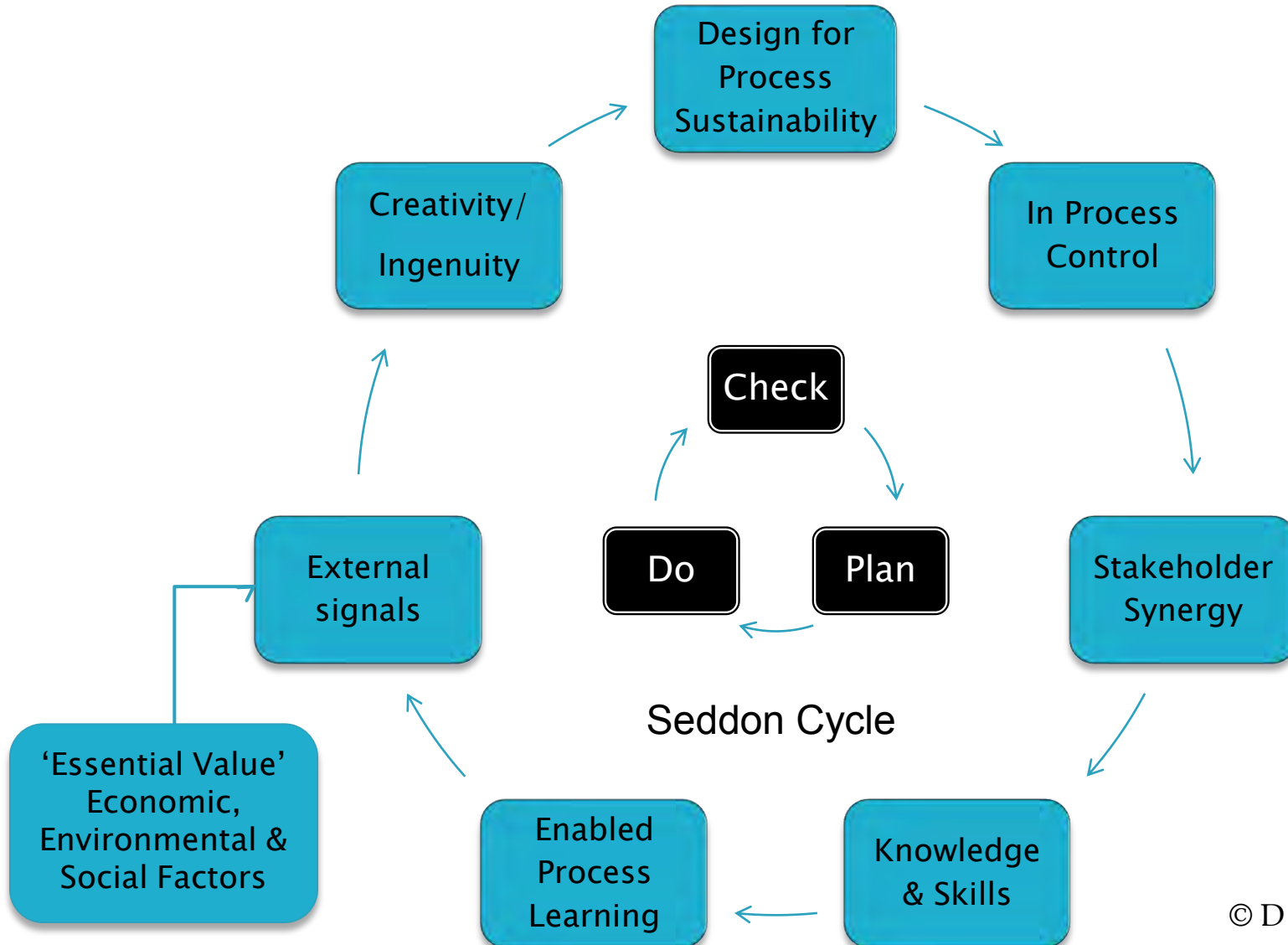




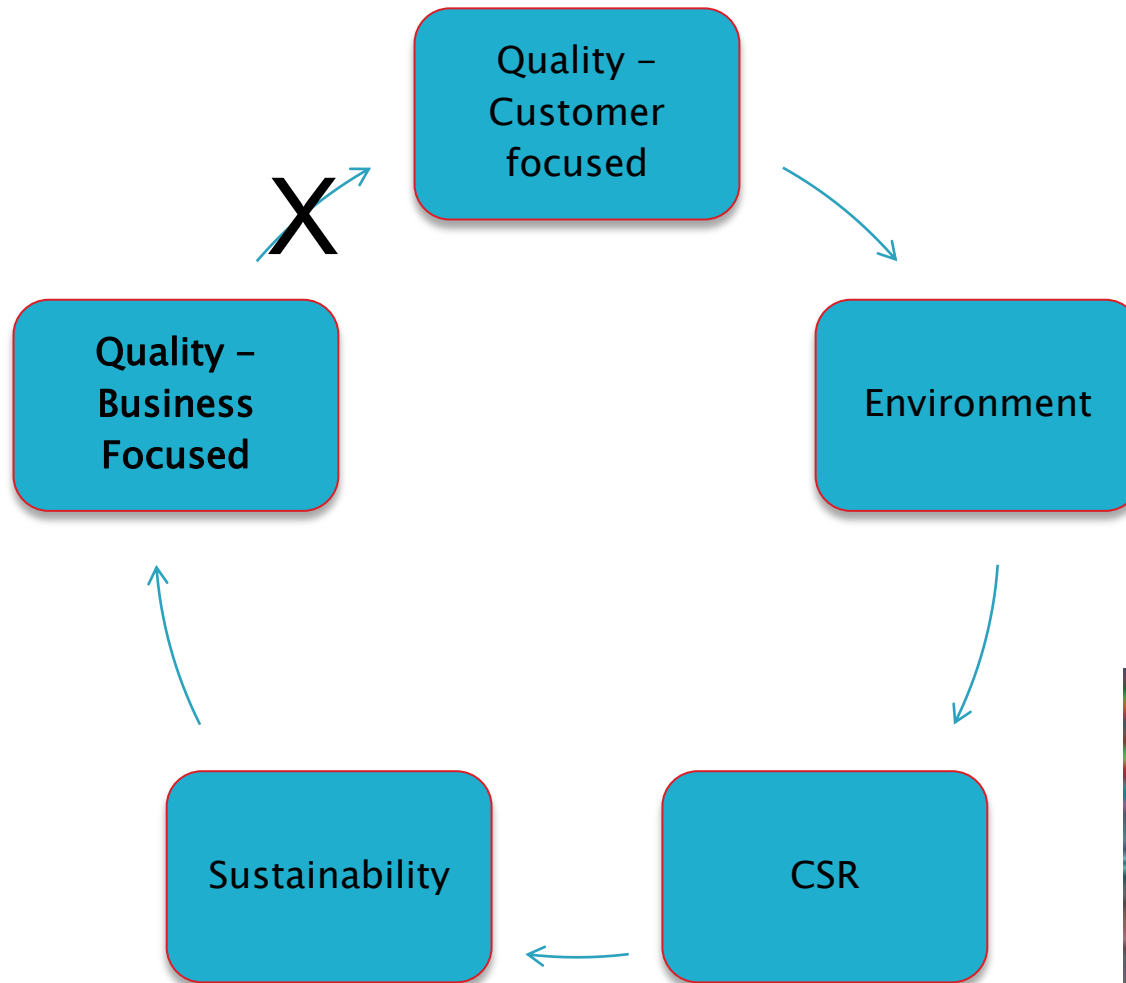
# A Virtuous Circle



# A Virtuous Circle



# Back to the Future



What does the Company want?

Sustainable,  
profitable  
business !

DTI Quality Video  
1984



# Thank You for Listening

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- ▶ Resources for this presentation

- <http://trailblazerbusinessfutures.wordpress.com/governance/seminar-resources/lc/>