



Prof. Dr(Eng). Vincent Gaspersz, IPU, Asean Eng

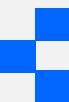
- Doktor Teknik Sistem dan Manajemen Industri, Institut Teknologi Bandung (ITB, 1991)
- ASCM (Association for Supply Chain Management)---www.apics.org, CPIM (Certified in Production and Inventory Management), CPIM-F (Certified in Production and Inventory Management Fellow), CSCP (Certified in Supply Chain Professional), CSCP-F (Certified in Supply Chain Management Fellow)
- International Quality Federation (www.iqf.org) Six Sigma Master Black Belt (SSMBB)
- American Society for Quality (www.asq.org) CSSBB (Certified Six Sigma Black Belt), CQE (Certified Quality Engineer), CQA (Certified Quality Auditor), CMQOE (Certified Manager of Quality/Organizational Excellence), CQIA (Certified Quality Improvement Associate)
- Registration Accreditation Board (www.exemplarglobal.org) CMSLS (Certified Management Systems Lead Specialist)
- Insinyur Profesional Utama (IPU) –Badan Kejuruan Teknik Industri (BTKI), Persatuan Insinyur Indonesia (PII)
- Asean Engineer Register (AER No. 10084), Asean Federation of Engineering Organization (AFEO)
- BNSP (Badan Nasional Sertifikasi Profesi) Certified Registered Assesor, No. Reg MET. 000 002527.
- Senior Member of the American Society for Quality (Since 1994, Member #: 00749775), International Member of the American Production and Inventory Control Society/Association for Supply Chain Management (Since 1995, Member #: 1023620), and Senior Member of the Institute of Industrial and Systems Engineers (Member #: 880194630)

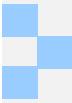
Systemic Design Thinking Skills in Tourism Industry & Education

(Keterampilan Berpikir Desain Sistemik dalam Industri Pariwisata & Pendidikan)

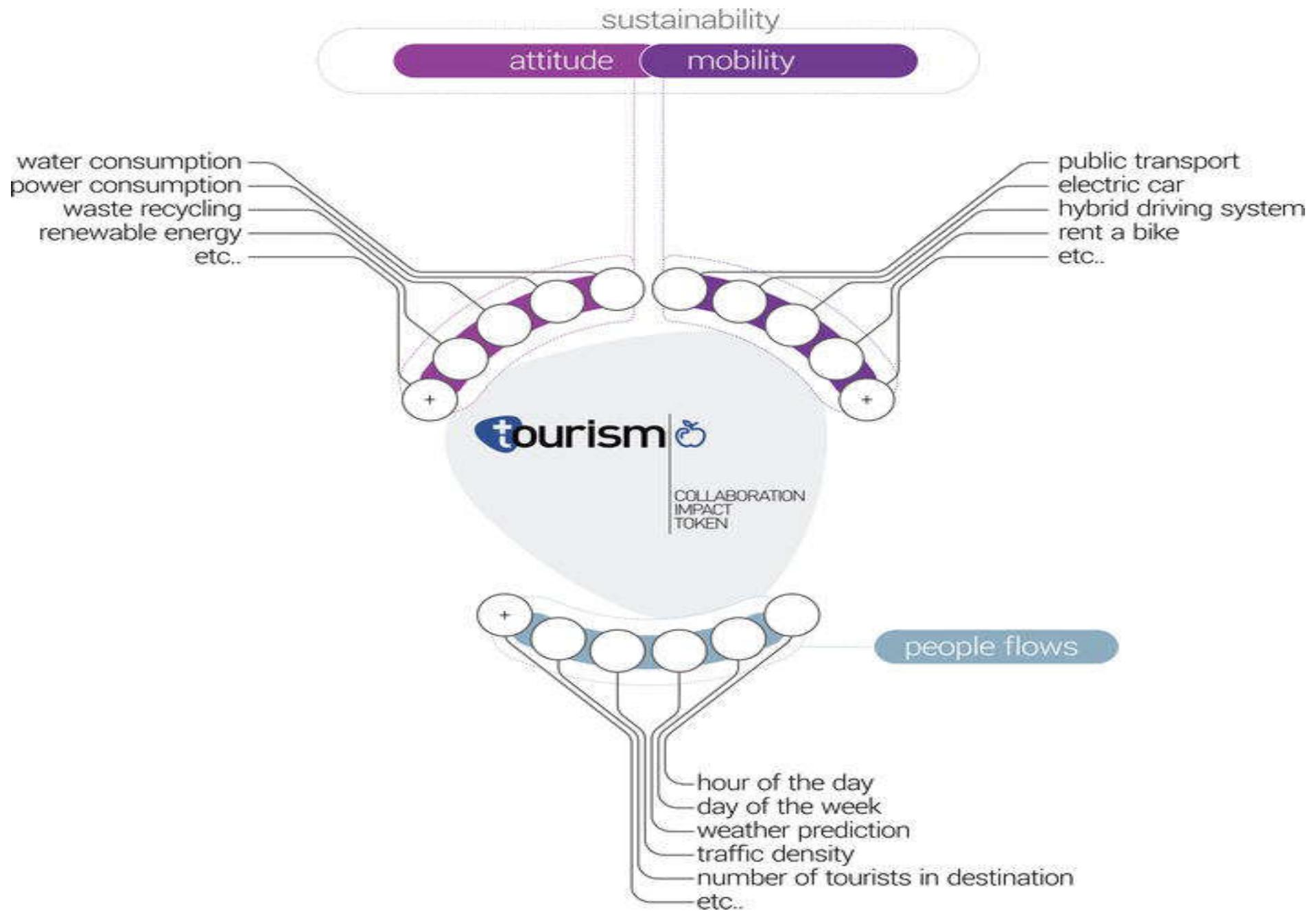
Systemic Design Thinking Skills in Tourism Industry & Education

- 1.Design Thinking
- 2.Systems Thinking
- 3.Statistical Thinking

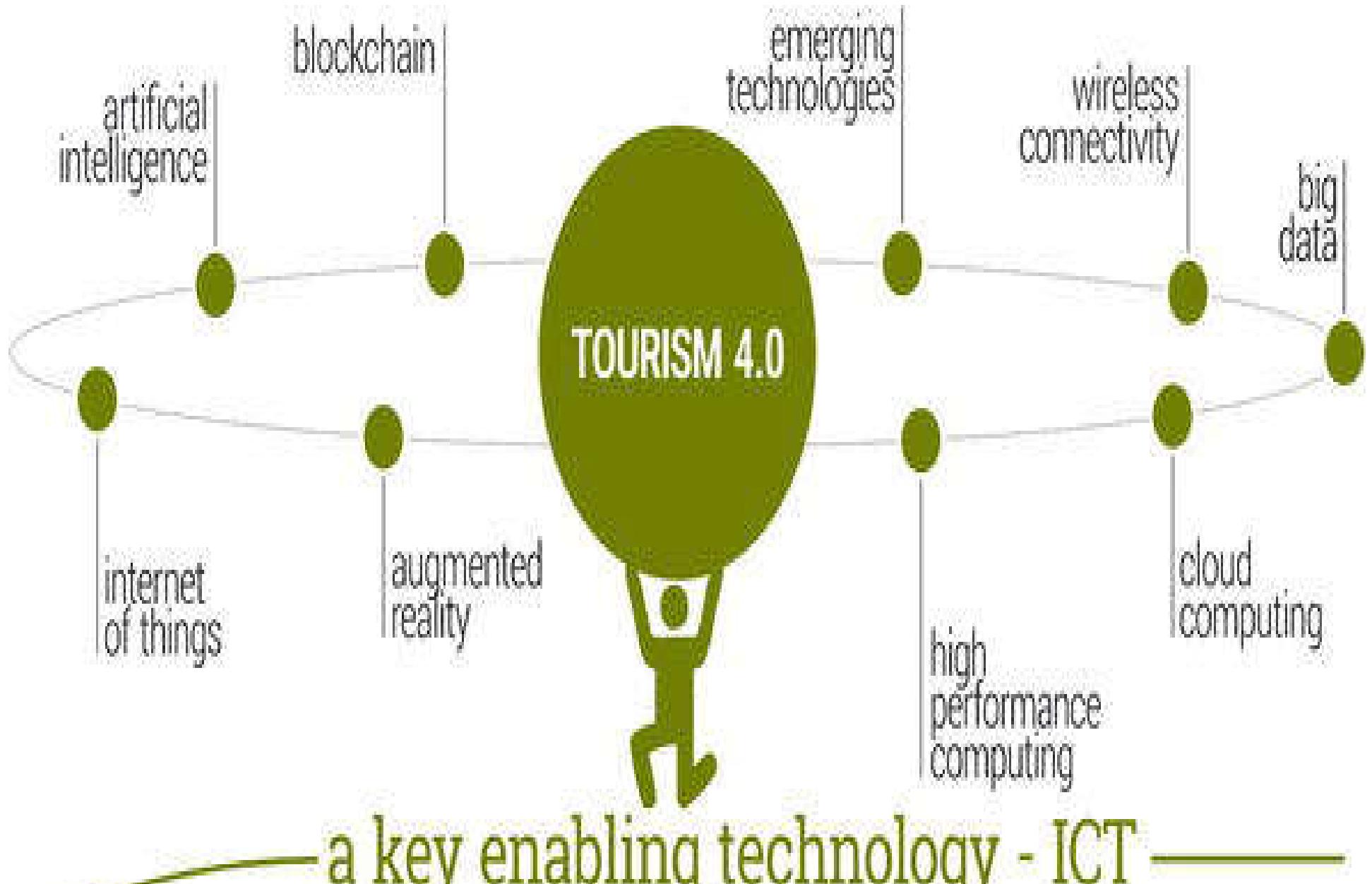




What is Design Thinking?

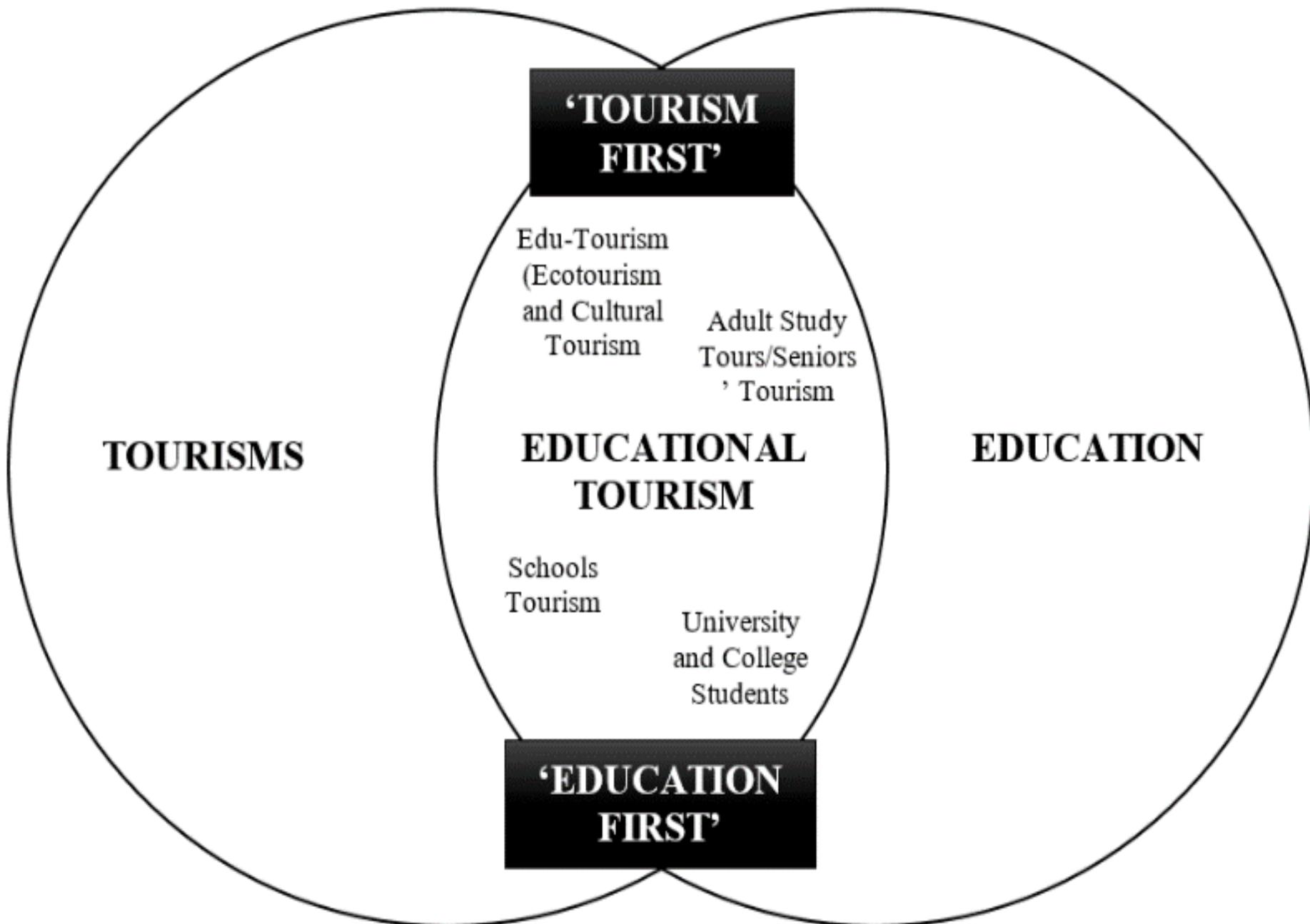


Cited from Peceny, et. al. (2018). Tourism 4.0: Challenges in Marketing a Paradigm Shift. <https://www.intechopen.com/books/consumer-behavior-and-marketing/tourism-4-0-challenges-in-marketing-a-paradigm-shift>

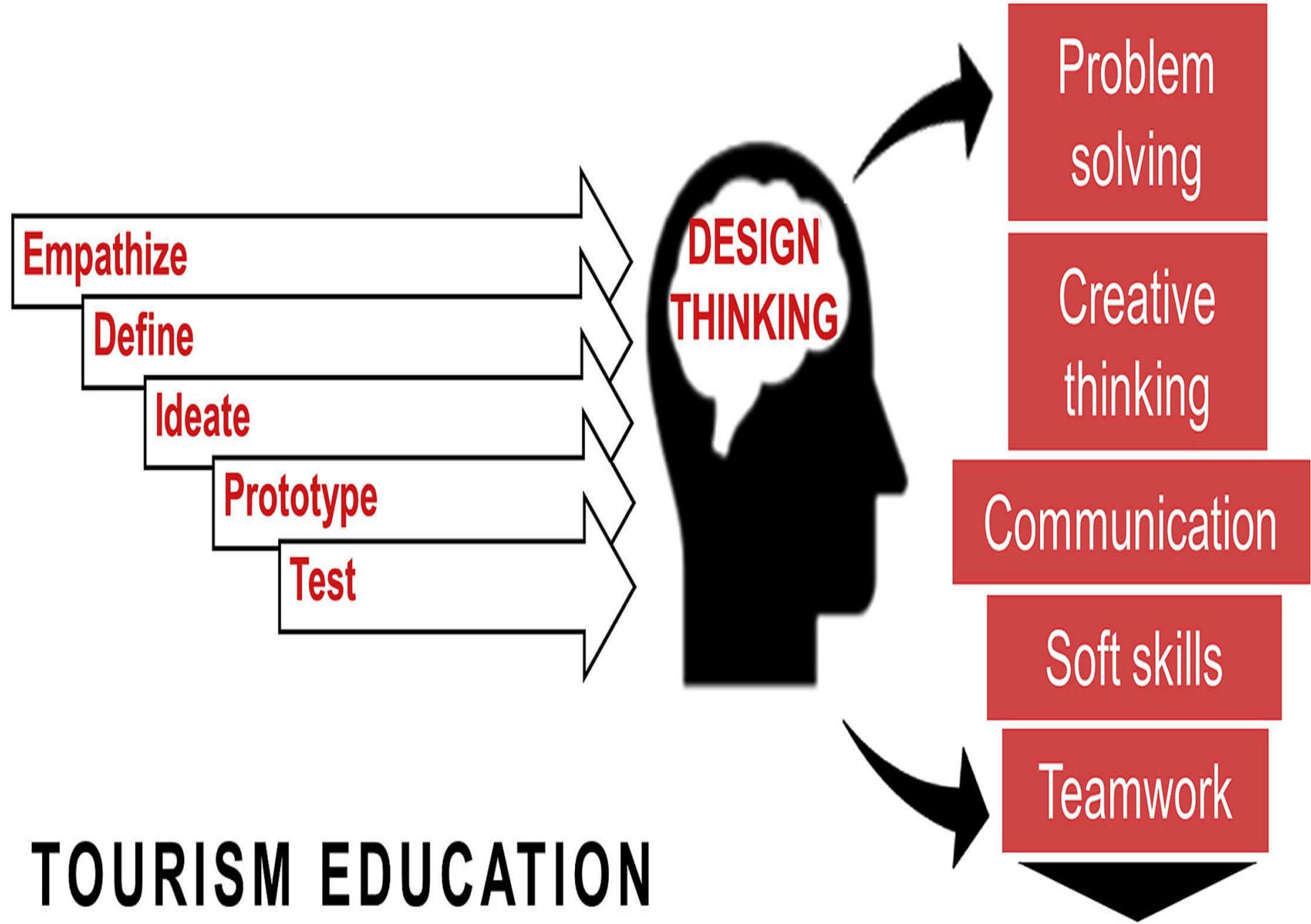


a key enabling technology - ICT -

Cited from Peceny, et. al. (2018). Tourism 4.0: Challenges in Marketing a Paradigm Shift. <https://www.intechopen.com/books/consumer-behavior-and-marketing/tourism-4-0-challenges-in-marketing-a-paradigm-shift>



Source: https://www.researchgate.net/figure/Two-Main-Component-of-Educational-Tourism-Sources-Abubakar-et-al-2014-and-Ritchie-et_fig1_326440860



Cited from Sandorova, et. al (2020). Design Thinking—A Revolutionary New Approach in Tourism Education? Downloaded from <https://www.sciencedirect.com/science/article/pii/S1473837619300425>

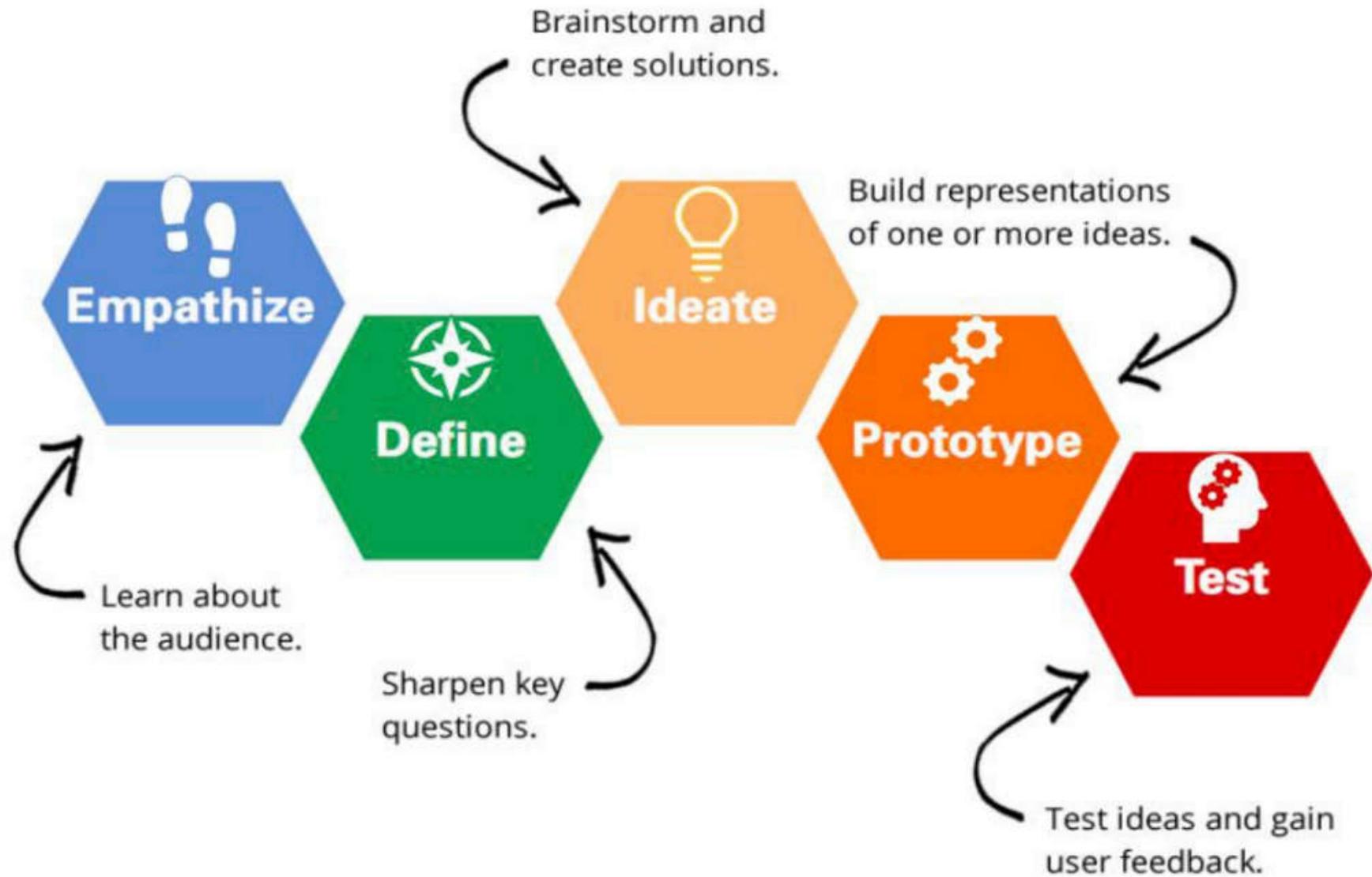
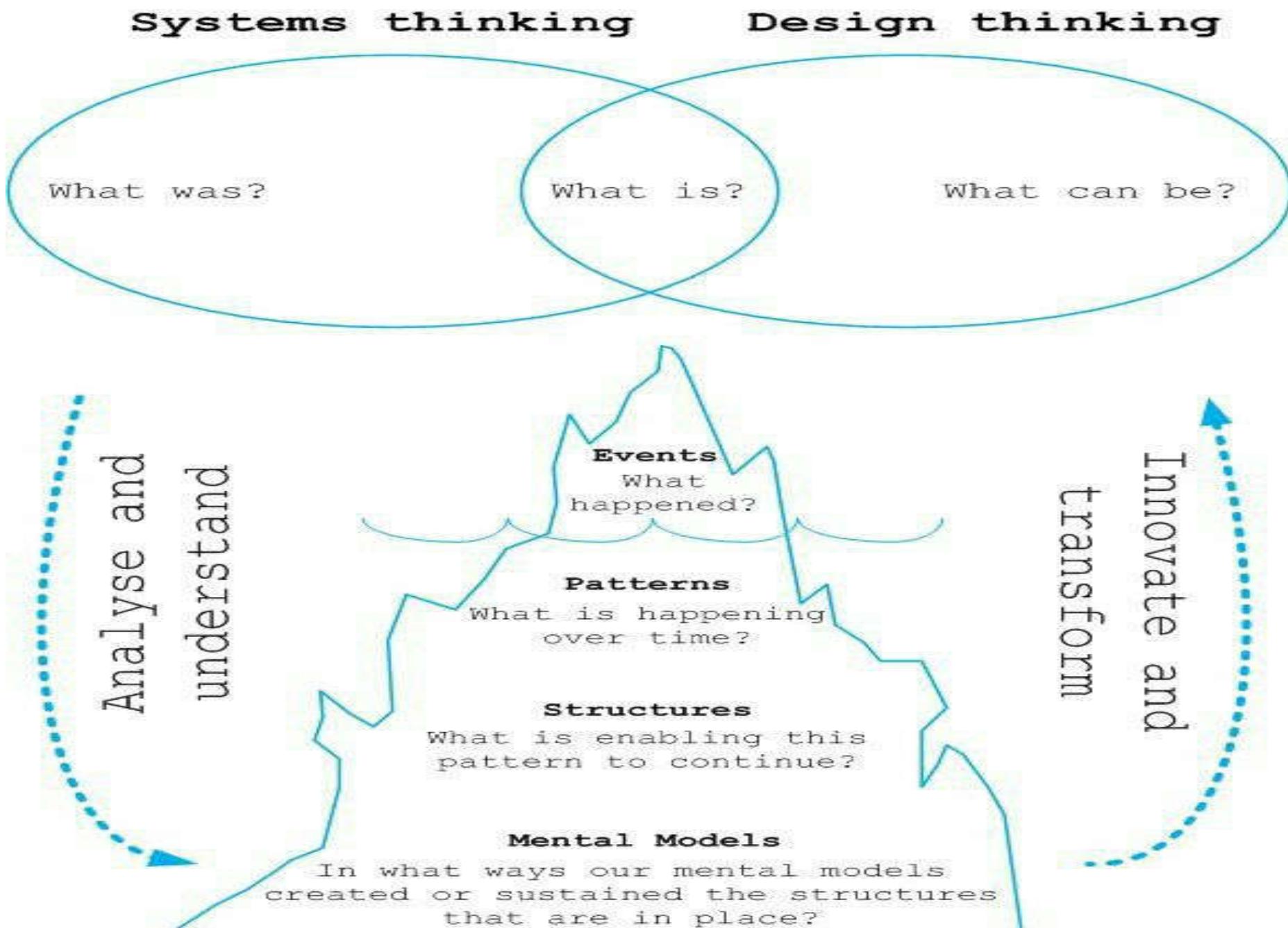


Fig. 1. Design thinking process ([Hoover, 2018](#)).

Cited from Sandorova, et. al (2020:2). Design Thinking—A Revolutionary New Approach in Tourism Education? Journal of Hospitality, Leisure, Sport & Tourism Education 26(2020) 100238



Source: <https://id.pinterest.com/pin/262545853257386847/>

Side-by-Side:

Design Thinking & Systems Thinking

Design Thinking (Berpikir Desain):

- Berfokus pada Pengguna: Memprioritaskan pemahaman mendalam tentang masalah kelompok inti pengguna.
- Berorientasi Solusi: Berujung pada prototipe untuk solusi yang dapat diuji dengan orang-orang sebagai pengguna.
- Aspirasi untuk Menyenangkan Pengguna: Berfungsi untuk membangun solusi yang memenuhi kebutuhan nyata pengguna.

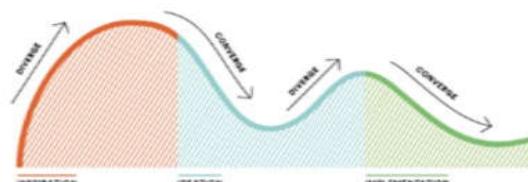


Image Credit: IDEO.org

Bersama (Berpikir Sistem & Berpikir Desain):

- Bijaksana: keduanya menekankan pemahaman masalah sebelum membangun solusi.
- Non-Linear: keduanya memprioritaskan mendapatkan masukan dari orang-orang dan kemudian mengulangi ide-ide Anda secara siklikal.
- Inovatif: keduanya mencari pendekatan baru berdasarkan pola kebutuhan yang sebelumnya tidak terdeteksi.



Image Credit: The Omidyar Group

Systems Thinking (Berpikir Sistem):

- Berfokus pada Sistem: Memprioritaskan pemahaman faktor dan dinamika yang membentuk masalah yang kompleks.
- Berorientasi Masalah: Berfokus pada pengembangan pemahaman bernuansa masalah melalui pembuatan peta sistem.
- Aspirasi untuk Kesehatan: Berfungsi untuk membangun solusi yang tidak menimbulkan konsekuensi yang tidak diinginkan, melainkan mendorong dinamika sistem yang sehat.

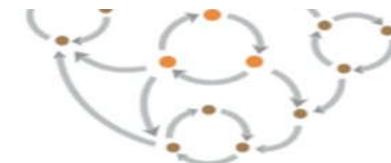
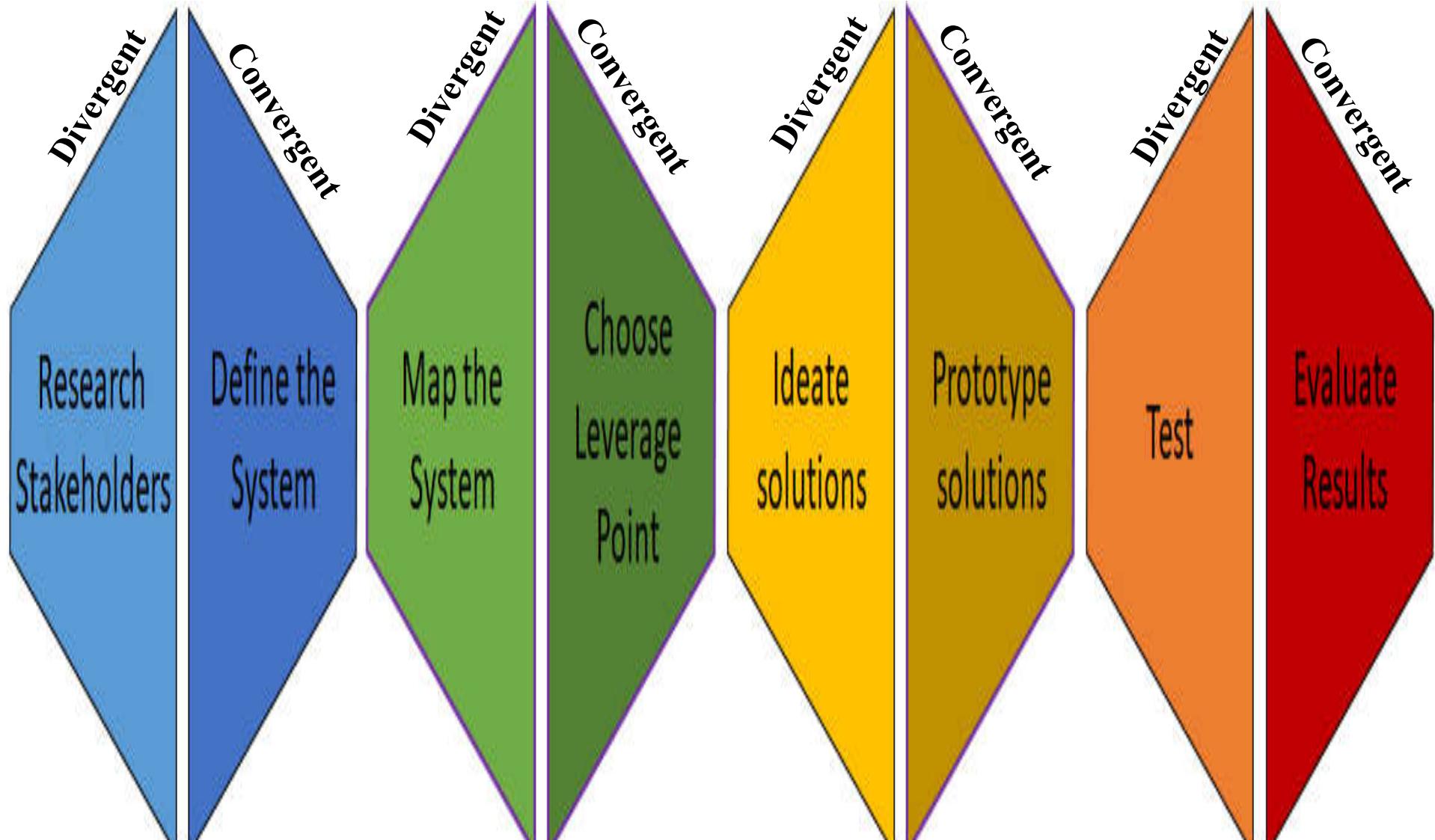


Image Credit: The Omidyar Group

Chart by Amy Ahearn

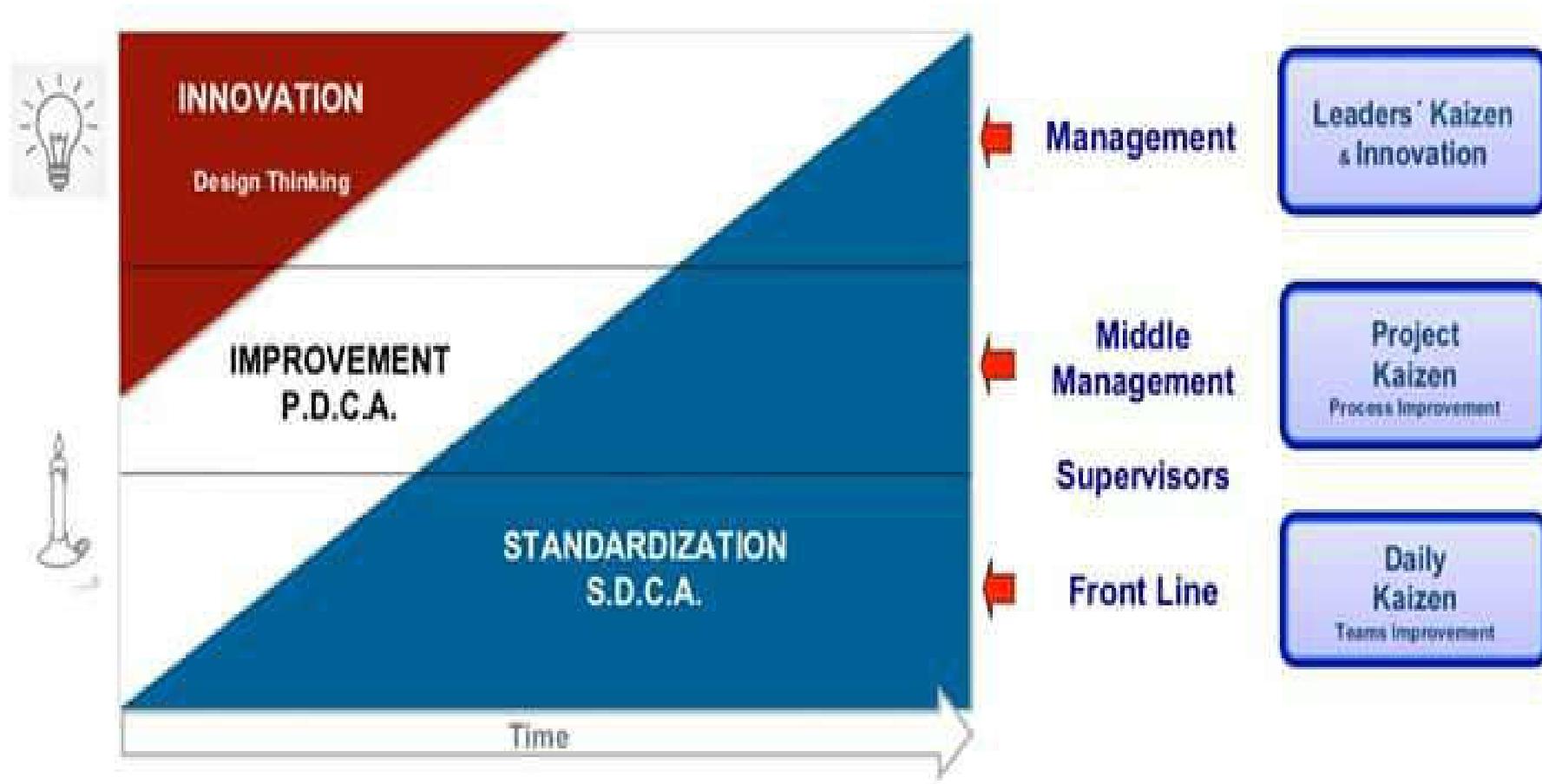
Cited from Ospina (2018). Beyond Design Thinking: The Systemic Design Thinking Framework. <https://conductal.medium.com/beyond-design-thinking-the-systemic-design-thinking-framework-8d4952271222>



Ketika anggota tim berbeda (Divergent), mereka meneliti, menganalisis, menghasilkan, atau mendesain secara mandiri, tanpa mendiskusikan pemikiran atau temuan dengan orang lain. Selanjutnya pada saat anggota tim berkumpul (Convergent), mereka saling berbagi temuan, wawasan, ide, atau desain. Prinsip Divergen dan Konvergen dilakukan secara terus-menerus.

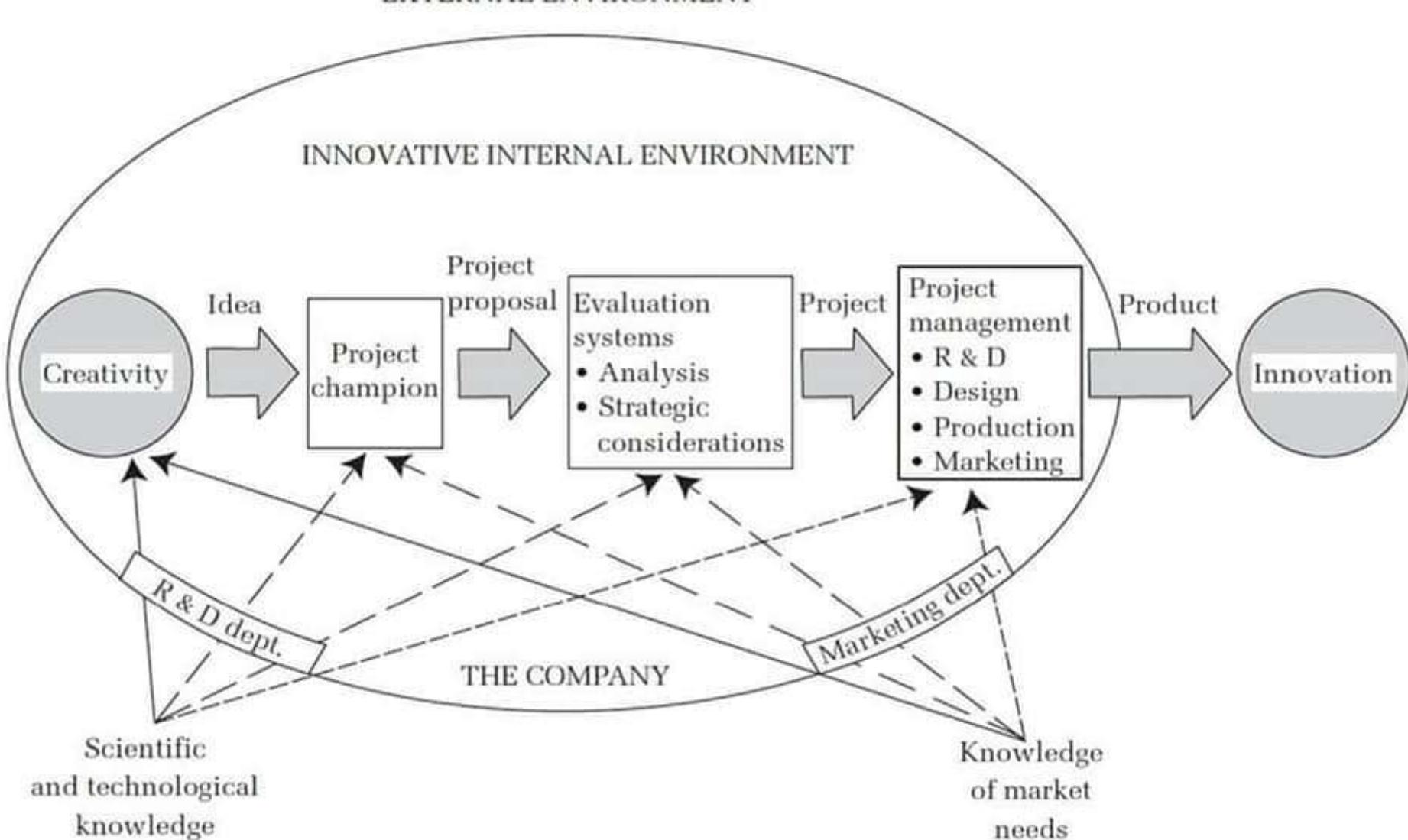
Cited from Ospina (2018). Beyond Design Thinking: The Systemic Design Thinking Framework. <https://conductal.medium.com/beyond-design-thinking-the-systemic-design-thinking-framework-8d4952271222>

The Kaizen Flag: Involving People at All Levels



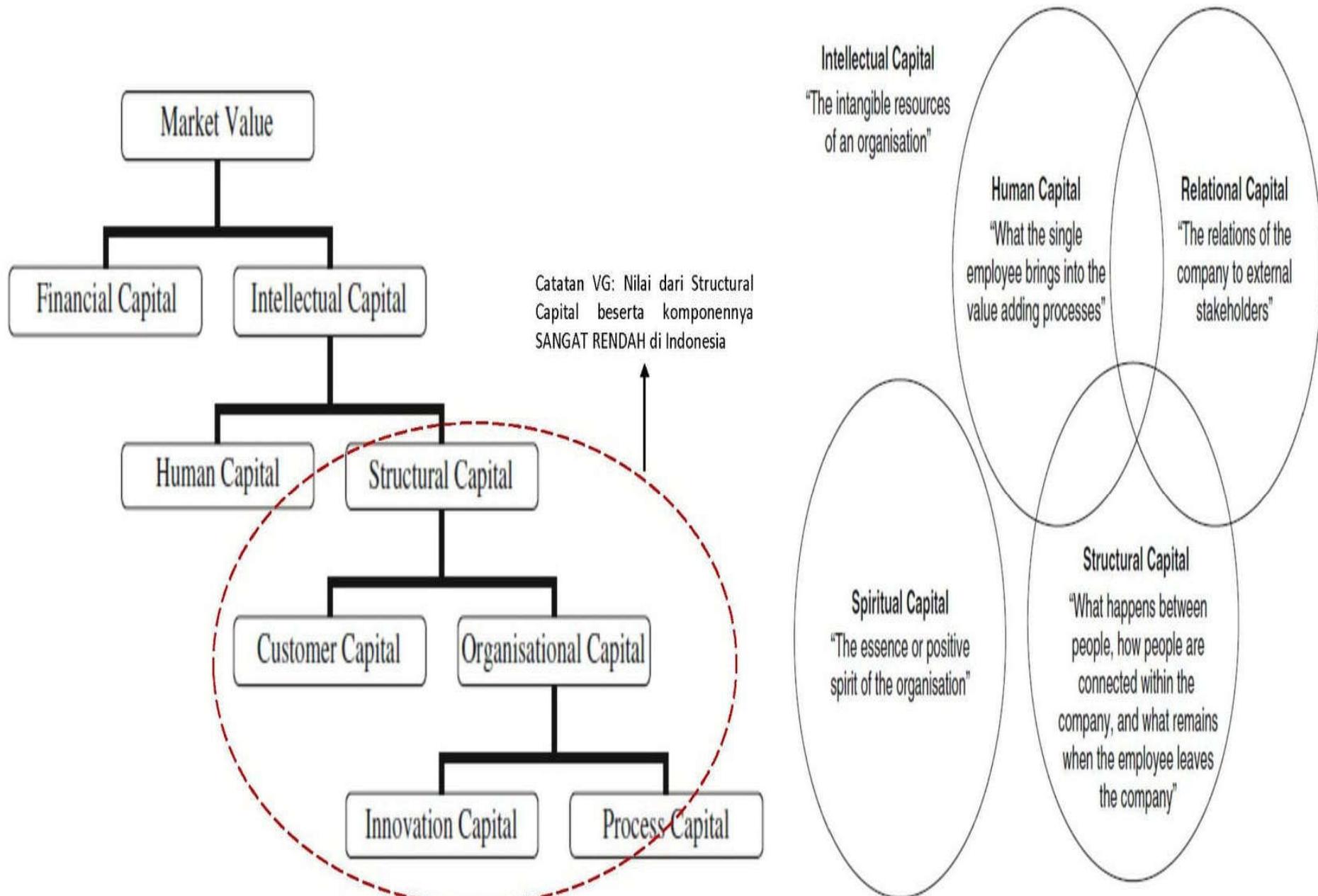
S.D.C.A. = Standardize, Do, Check, Act

P.D.C.A. = Plan, Do, Check Act

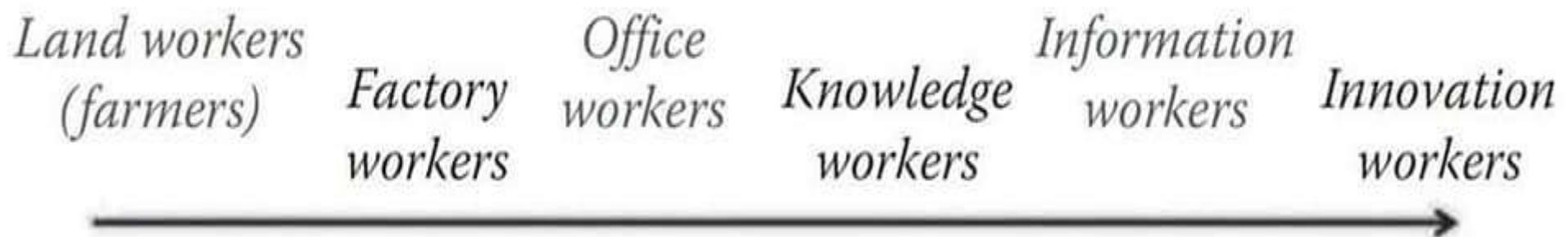


Twiss's 'Egg' model of innovation

Source: Howells, John. 2005. *The Management of Innovation and Technology: The Shaping of Technology and Institutions of the Market Economy*. SAGE Publications, London. Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt & Certified Management Systems Lead Specialist.



Source: Blankenburg, K. 2018., Intellectual Capital in German Non-profit Organisations: An Empirical Study, Springer Internasional Publishing, 2018, 233 pages. Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt and Certified Management System Lead Specialist



Business age (wave)

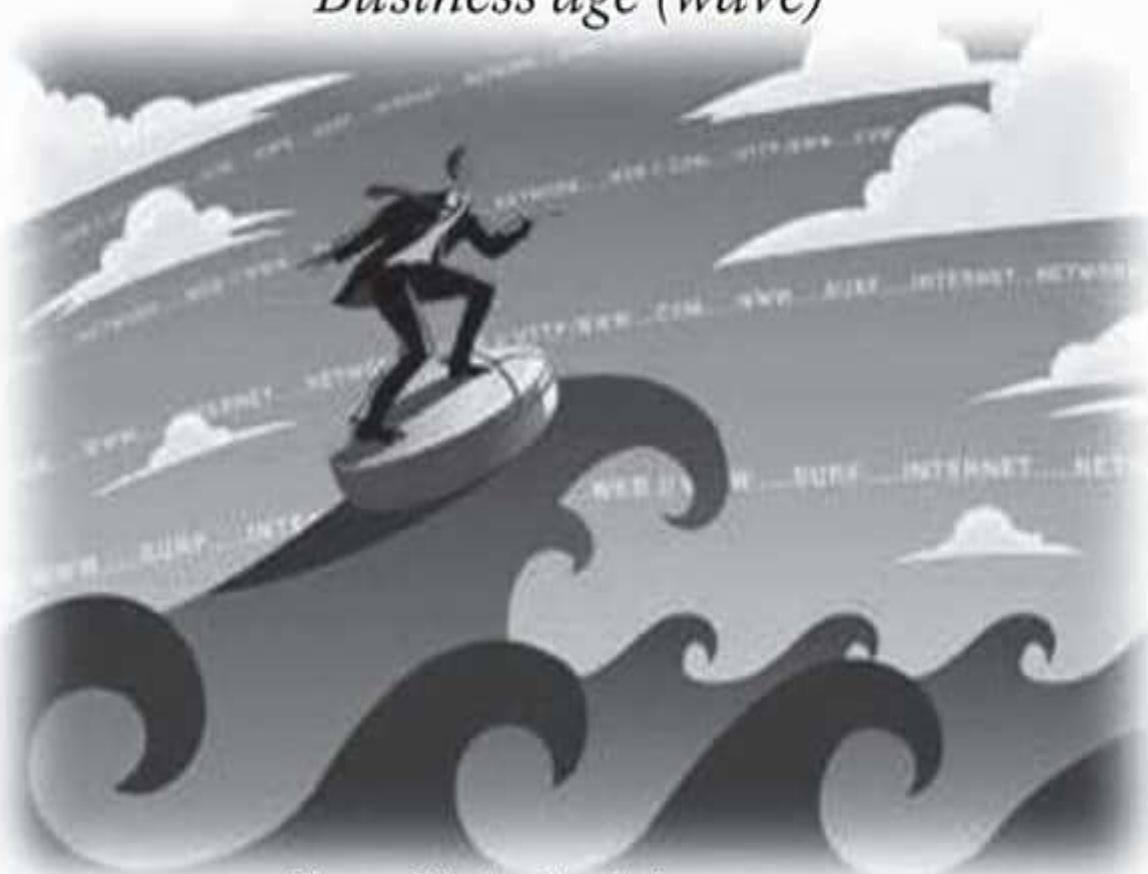
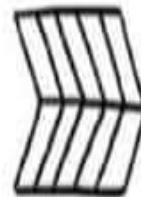


Figure: Worker Evolution

Source: H. James Harrington. 2018. Innovation Change Management (ICM). Preparing Your Organization for the New Innovative Culture. CRC Press, Taylor and Francis Group, New York.
Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt and Certified Management Systems Lead Specialist.

INNOVATION

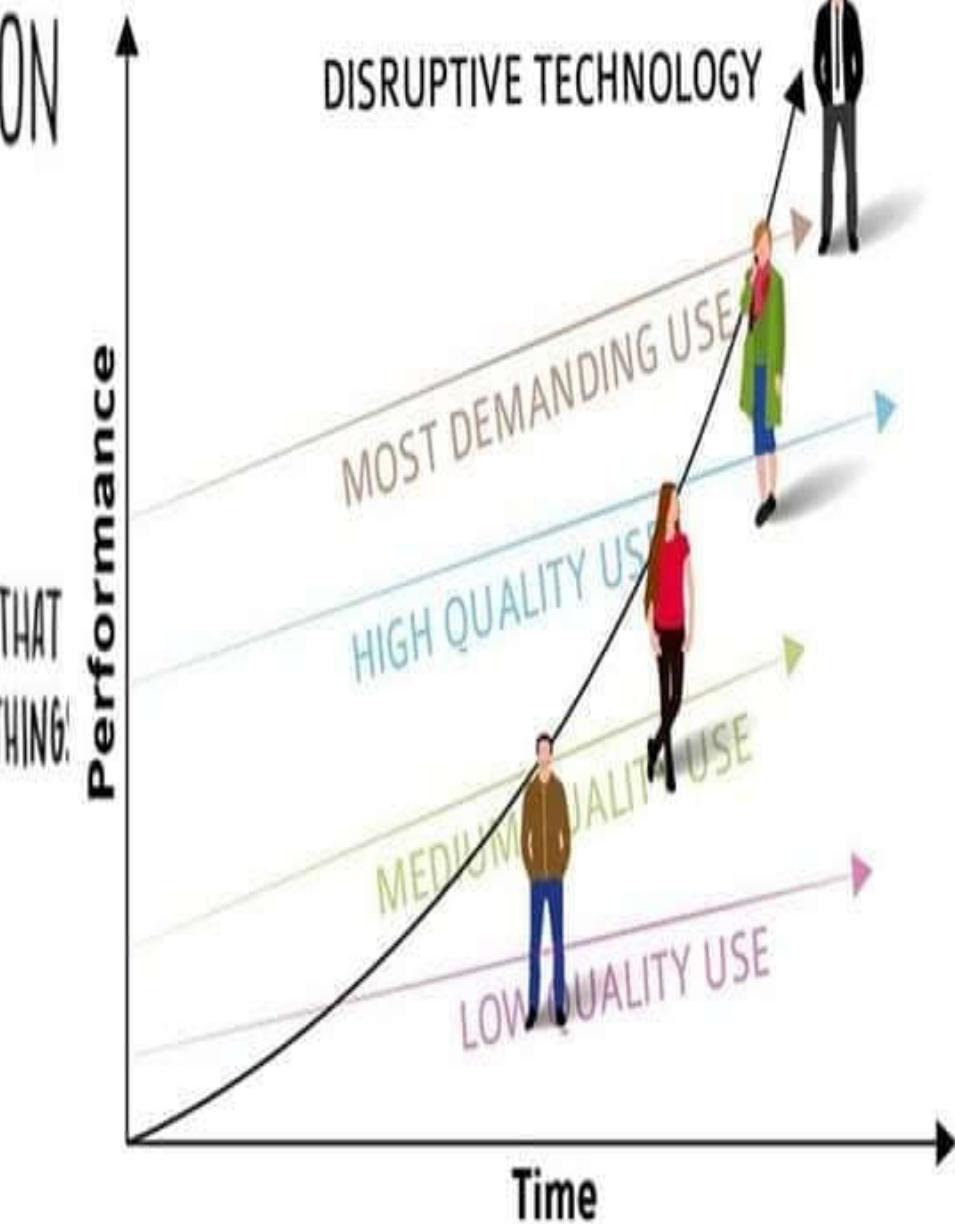


DOING THE SAME
THINGS A BIT
BETTER

DOING NEW
THINGS

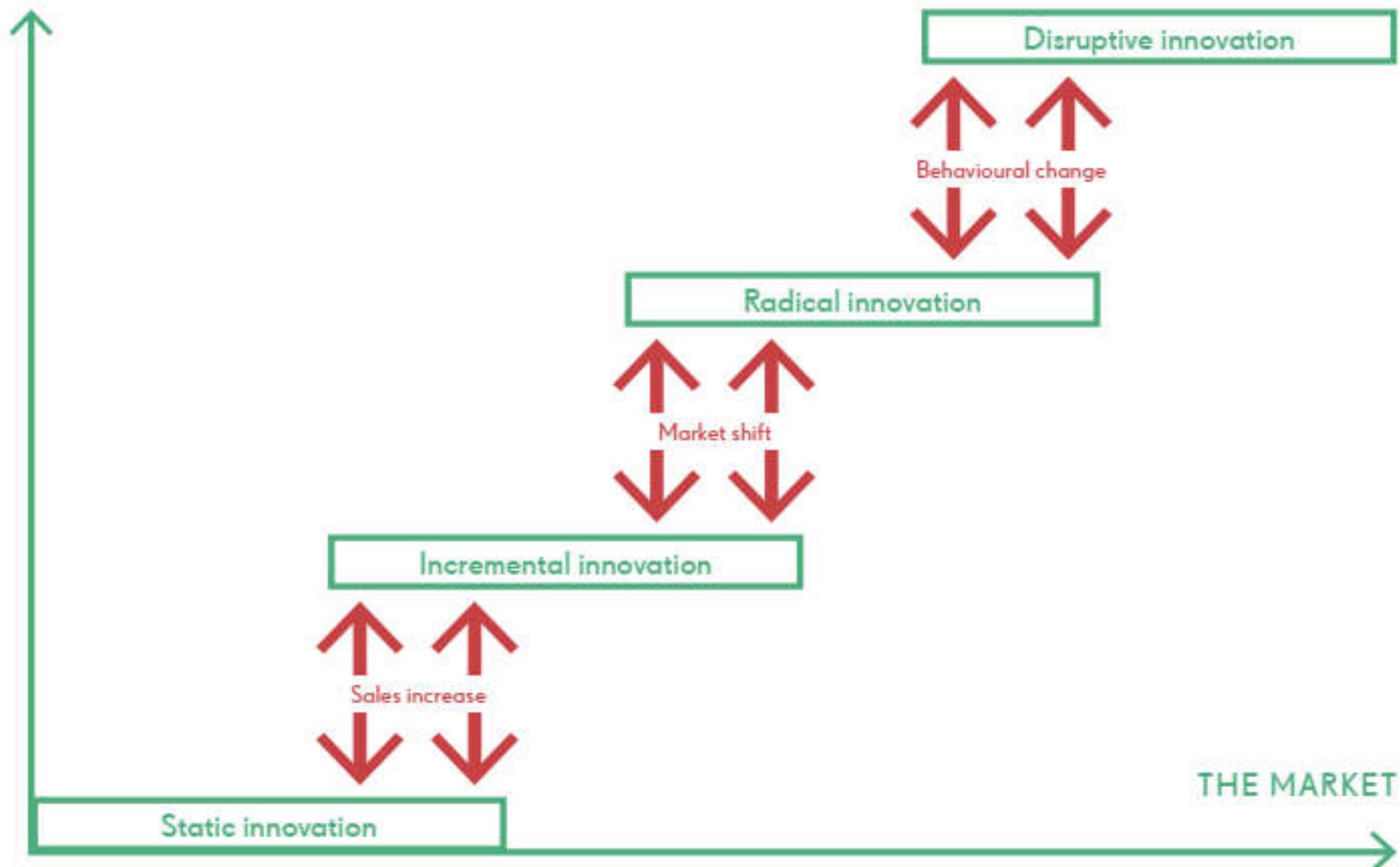
DISRUPTION

MAKING THINGS THAT
MAKE THE OLD THING
OBSOLETE



Source: www.ionics.de Why Uber isn't disruptive but Netflix is - Disruptive Innovation explained. Accessed on Januari 2019. Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt & Certified Management Systems Lead Specialist.

IMPACT



Source: Woolley, M. 2014. Travelling Light: An Evolutionary Approach to Radical Innovation. P.85. Chapter 3 in The Highways and Byways to Radical Innovation: Design Perspectives. Christensen, P. R. and Junginger, S. (eds). Pp.85-94. Design School Kolding and University of Southern Denmark, Narayana Press, Gylling, Denmark. Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt and Certified Management Systems Lead Specialist.

Upgrading Digital Marketing Strategy

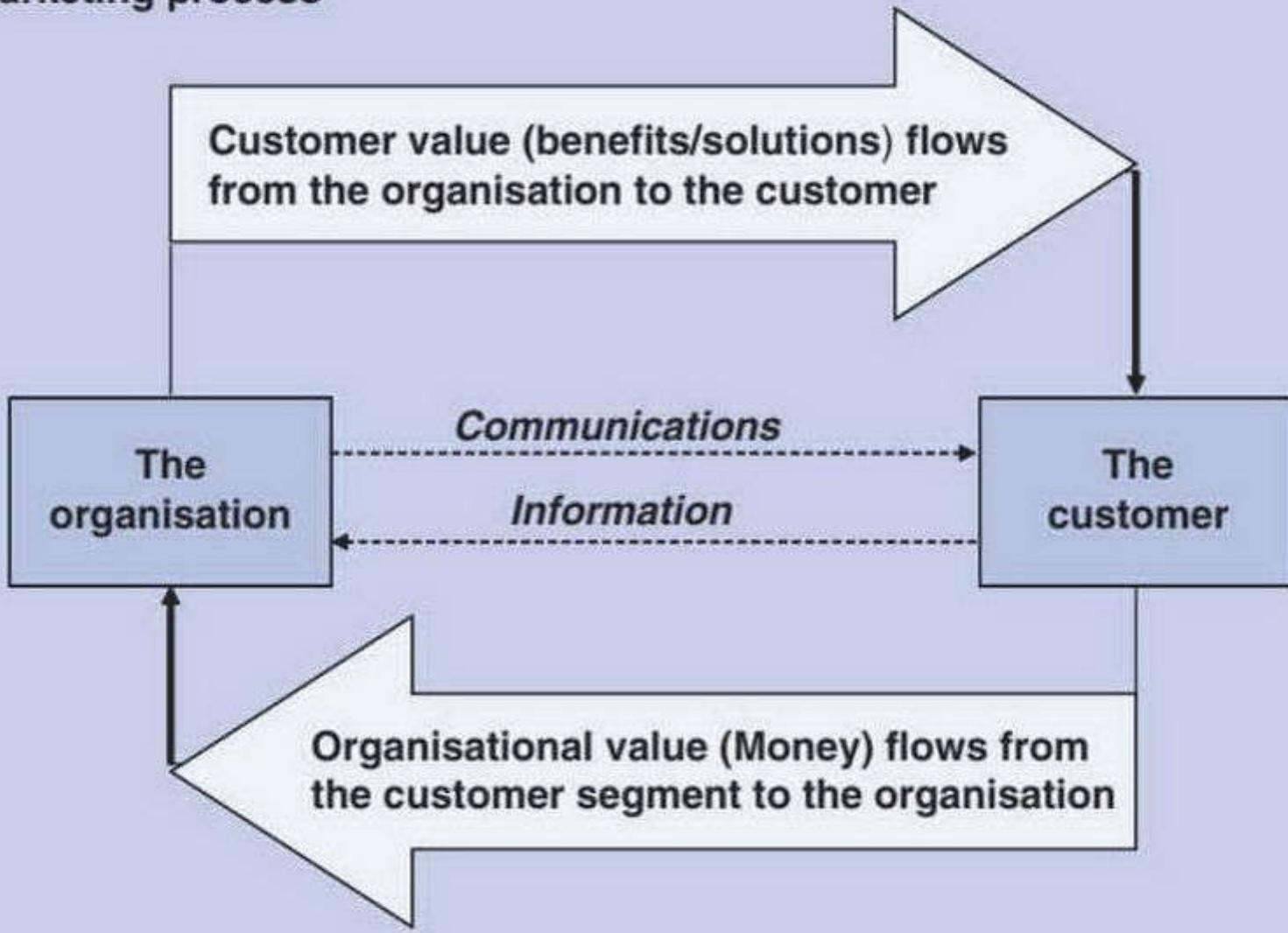
From Marketing 1.0 to Marketing 4.0



History of the evolution of marketing.

Source: Philip Kotler's Speech at the 2015 World Marketing Summit, Tokyo.

The marketing process



Source: Philip Kotler's Speech at the 2015 World Marketing Summit, Tokyo.



Source: <https://marketing-insider.eu/marketing-explained/part-iii-designing-a-customer-driven-marketing-strategy-and-mix/pricing-strategies-and-considerations/customer-value-based-pricing/>



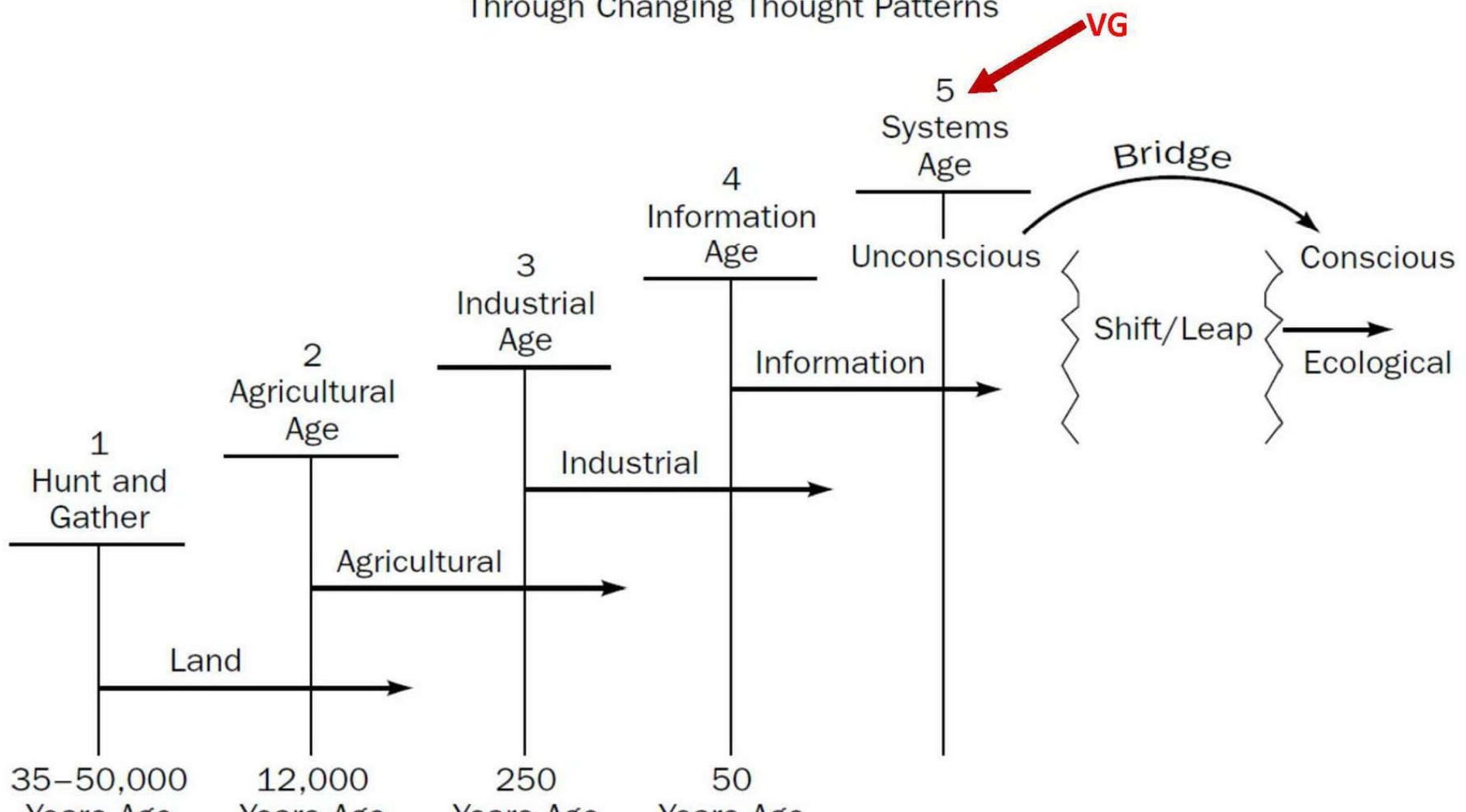
What is Systems Thinking?



Shifting View of the World

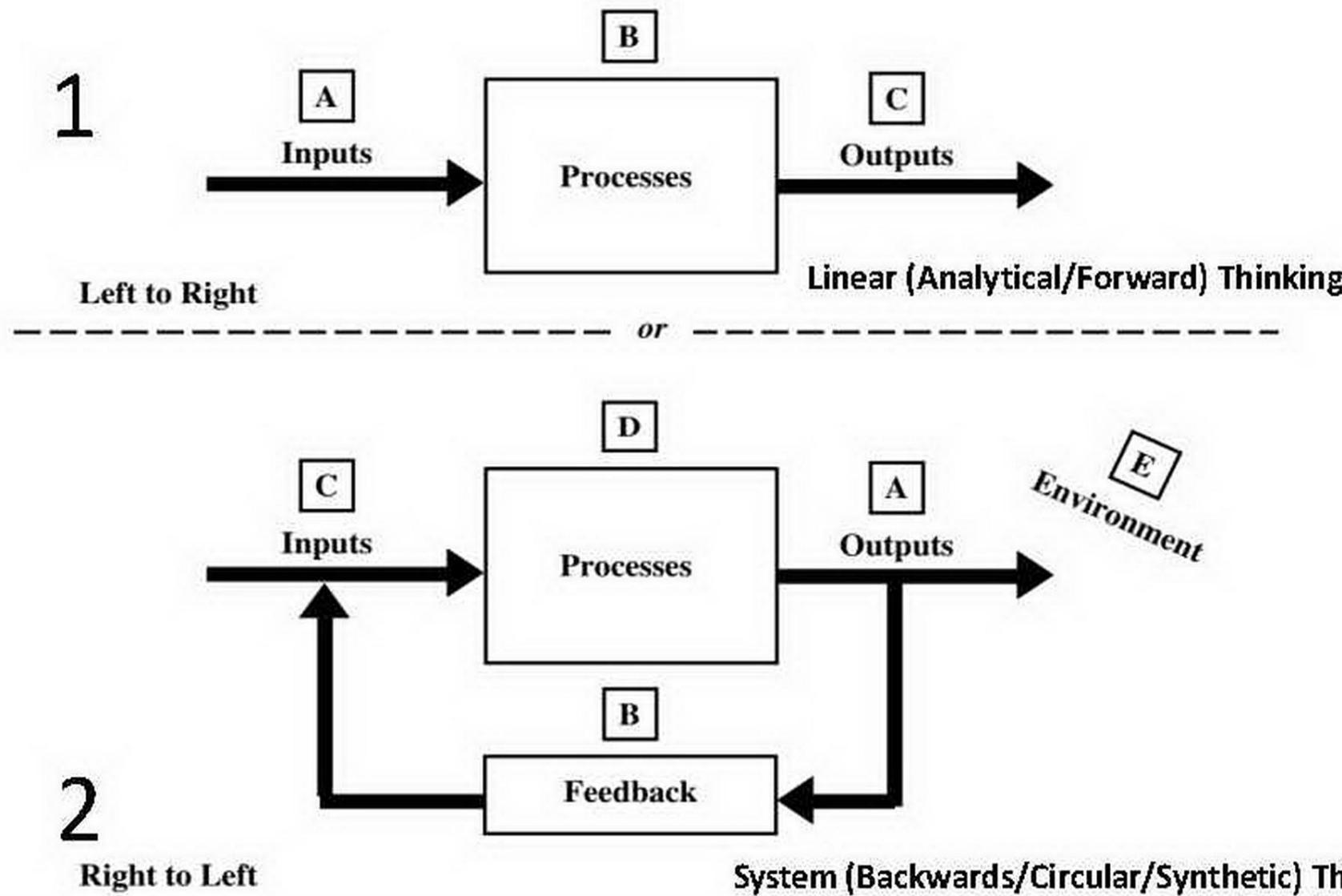
(4.5 Billion Years Old)

Through Changing Thought Patterns

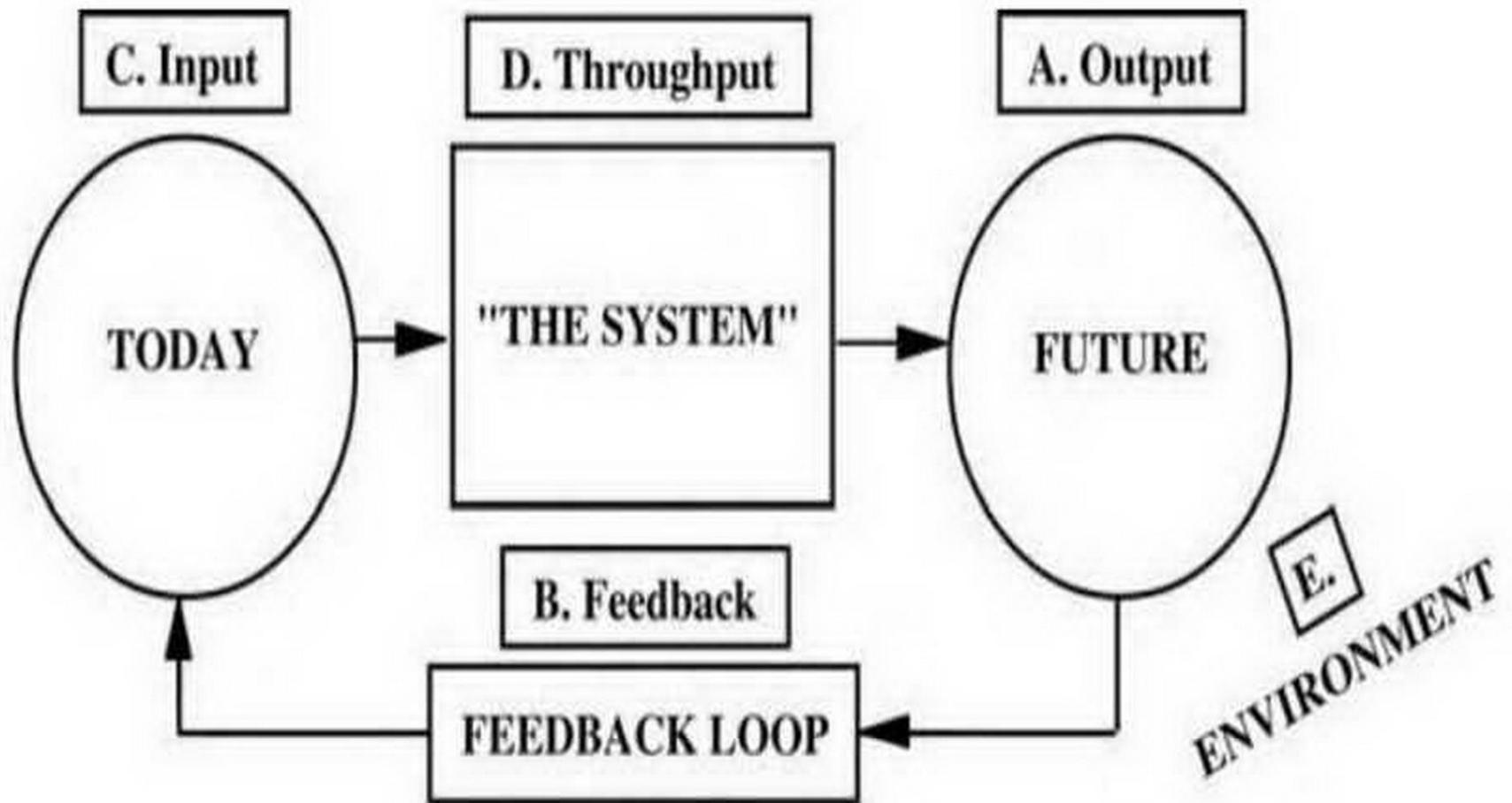


Source: Stephen G. Haines, Gail Aller-Stead, and James McKinlay. 2005. Enterprise-Wide Change: Superior Results Through Systems Thinking. xxiii + 326 pages. John Wiley & Sons, Inc. New York. Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt & Certified Management Systems Lead Specialist

Which is it for you?



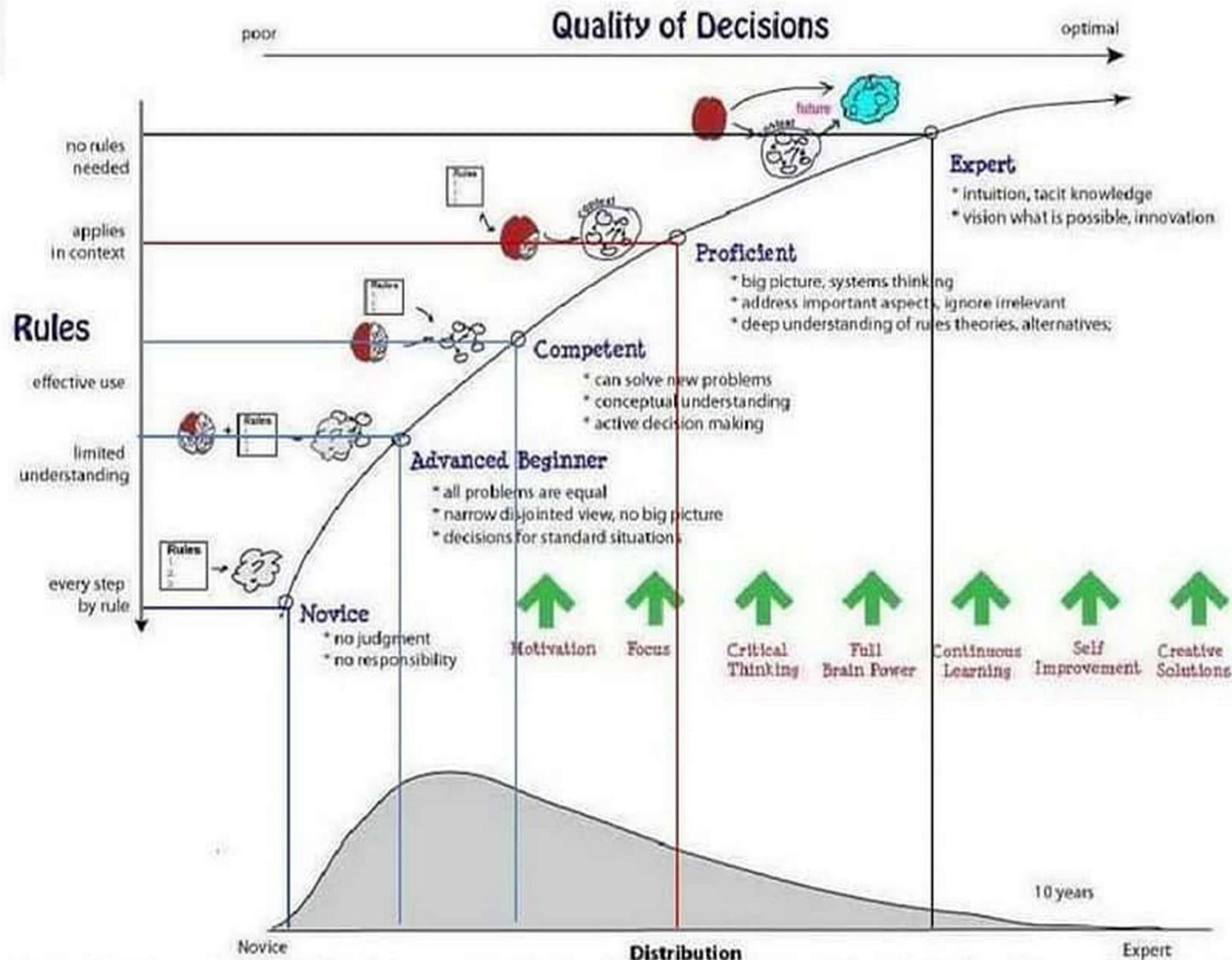
Source: Haines, S. T. 2000. The Systems Thinking Approach to Strategic Planning and Management., St. Lucie Press, London. Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt & Certified Management Systems Lead Specialist



Systems: Systems are made up of a set of components that work together for the overall objective of the whole (output).

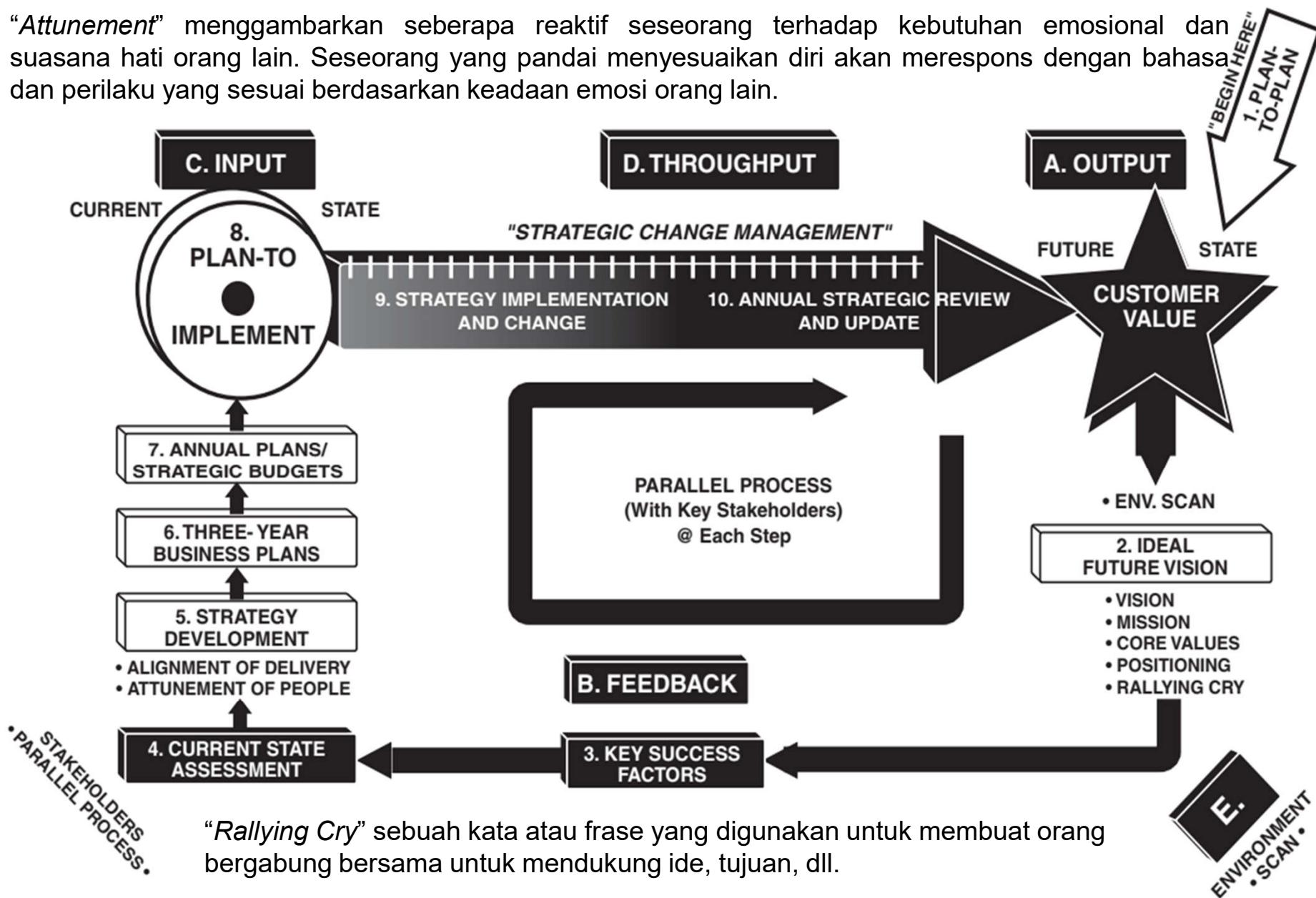
Source: Haines, S. T. 2000. The Systems Thinking Approach to Strategic Planning and Management., St. Lucie Press, London. Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt & Certified Management Systems Lead Specialist

Genesis of The Expert



Source: <http://softwarecreation.org/2009/how-to-become-an-expert-top-7-qualities>. Accessed on January 2019 and Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt & Certified Management Systems Lead Specialist

“Attunement” menggambarkan seberapa reaktif seseorang terhadap kebutuhan emosional dan suasana hati orang lain. Seseorang yang pandai menyesuaikan diri akan merespons dengan bahasa dan perilaku yang sesuai berdasarkan keadaan emosi orang lain.



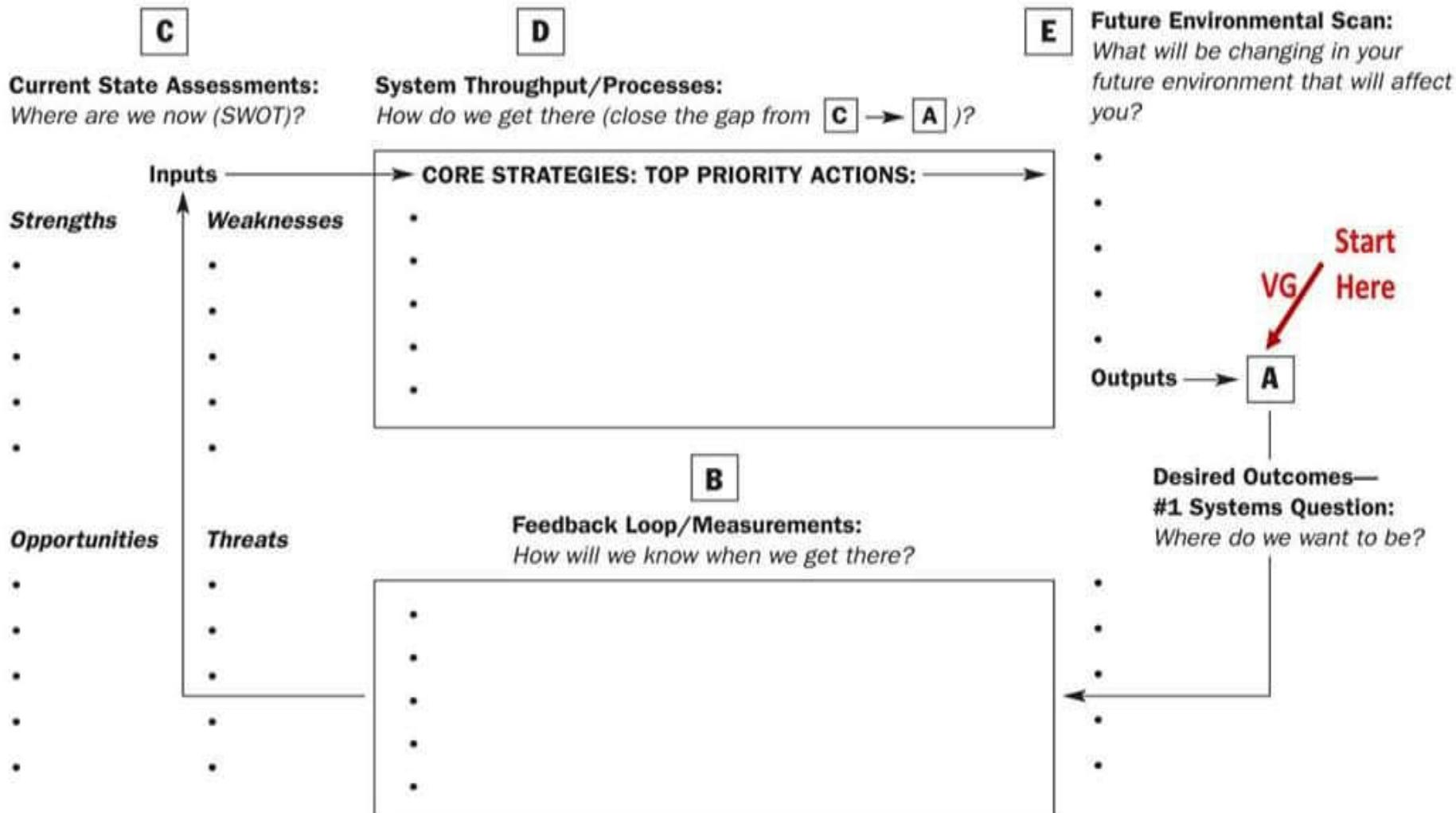
“Organization as a System: Systems Thinking Approach”

Source: Haines, S. G. 2000. *The Systems Thinking Approach to Strategic Planning and Management*. St. Lucie Press, London.

STRATEGIC THINKING: ABCs TEMPLATE

"The Simplicity of Systems Thinking"

(Name of the System – Issue – Problem – Project – Change Effort)

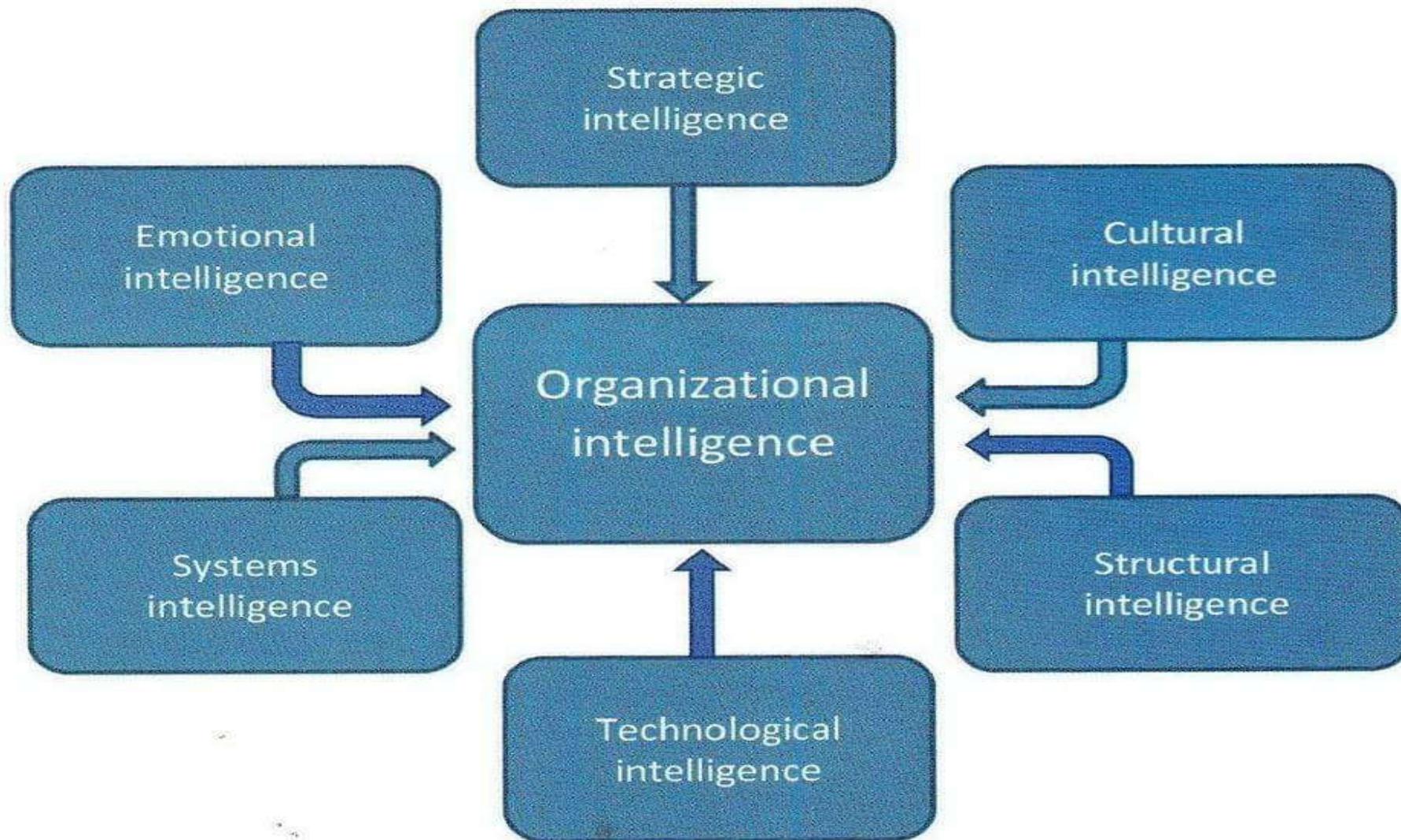


Enterprise-Wide Change. Copyright © 2005 by John Wiley & Sons, Inc. Reproduced by permission of Pfeiffer, an Imprint of Wiley. www.pfeiffer.com

Source: Stephen G. Haines, Gail Aller-Stead, and James McKinlay. 2005. Enterprise-Wide Change: Superior Results Through Systems Thinking. xxiii + 326 pages. John Wiley & Sons, Inc. New York. Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt & Certified Management Systems Lead Specialist

INTELLIGENCE INPUTS

Figure 1. These six dimensions of intelligence contribute to organizational success.



Source: David J. Glew and Stephen C. Harper. 2018. Leverage Emotional Intelligence with Cultural Intelligence. Industrial Management Magazine. Vol 60 No. 3, May/June 2018. Pp.25-30.Institute of Industrial & Systems Engineers (IIE), Society for Engineering and Management Systems. Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt & Certified Management Systems Lead Specialist.



What is Statistical Thinking?

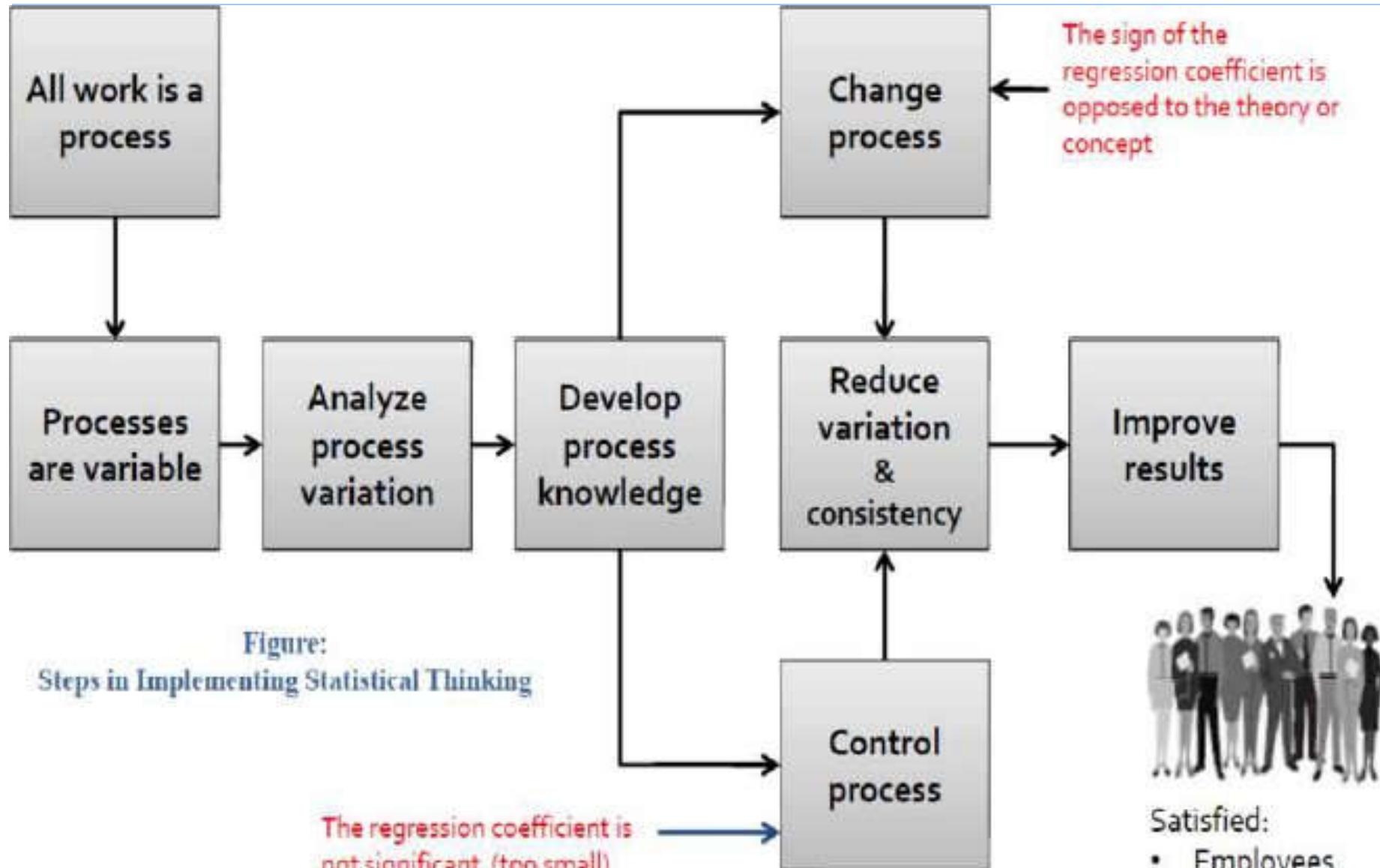


Figure:
Steps in Implementing Statistical Thinking

Source: Roger Hoerl and Ron Snee, 2012., Statistical Thinking: Improving Business Performance, p.13.
 John Wiley & Sons, New Jersey. Cited by: Vincent Gaspersz, Lean Six Sigma Master Black Belt & Certified Management System Lead Specialist

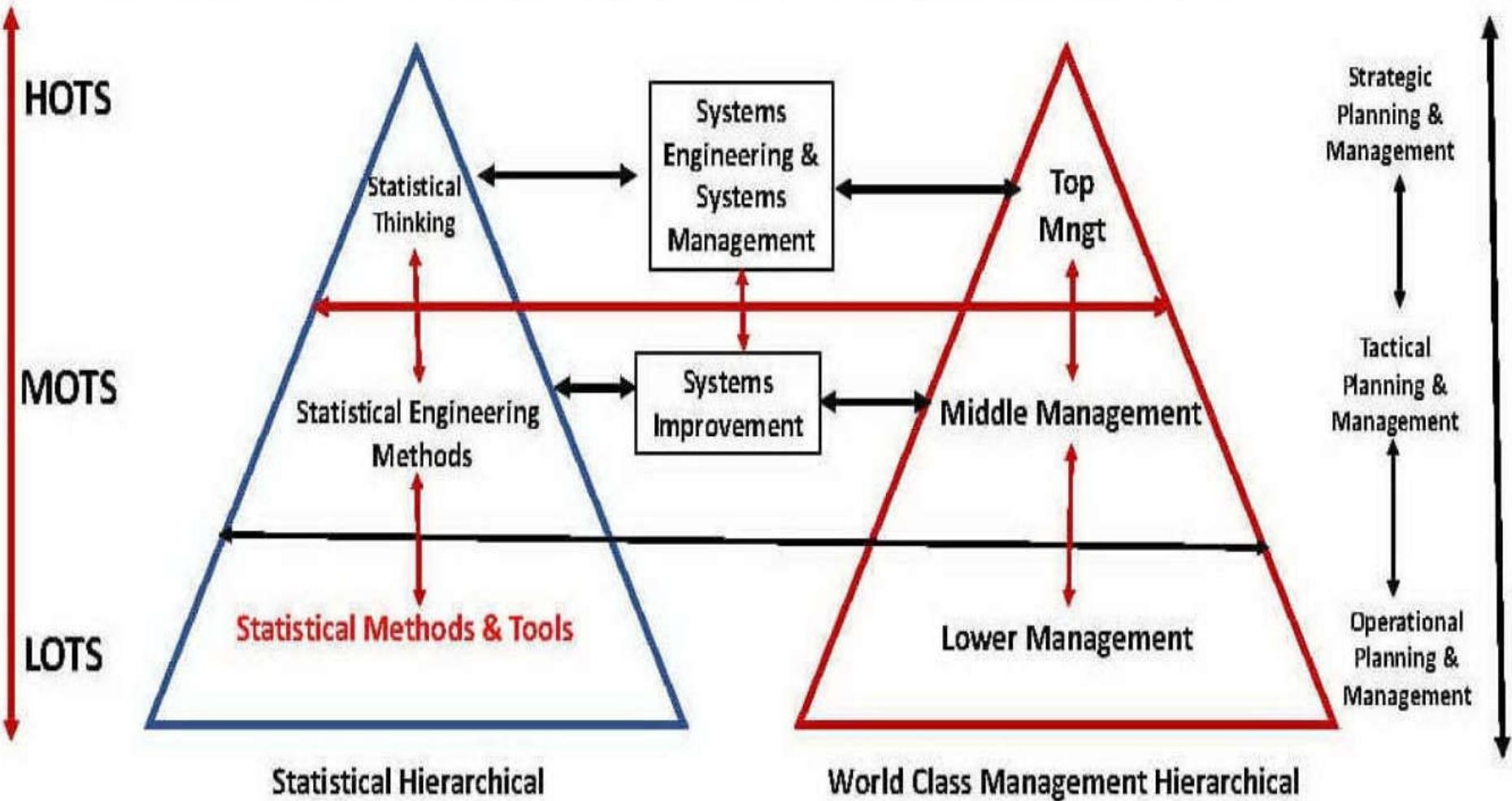


Satisfied:

- Employees
- Customers
- Shareholders
- Community

Linking Statistics Learning with World Class Business Management Needs

(Designed and Implemented by: Vincent Gaspersz, Lean Six Sigma Master Black Belt & Certified Management Systems Lead Specialist)



LOTS = Lower Order Thinking Skills; MOTS = Middle Order Thinking Skills; HOTS = Higher Order Thinking Skills.

Aplikasi Statistical Thinking Pada Manajemen

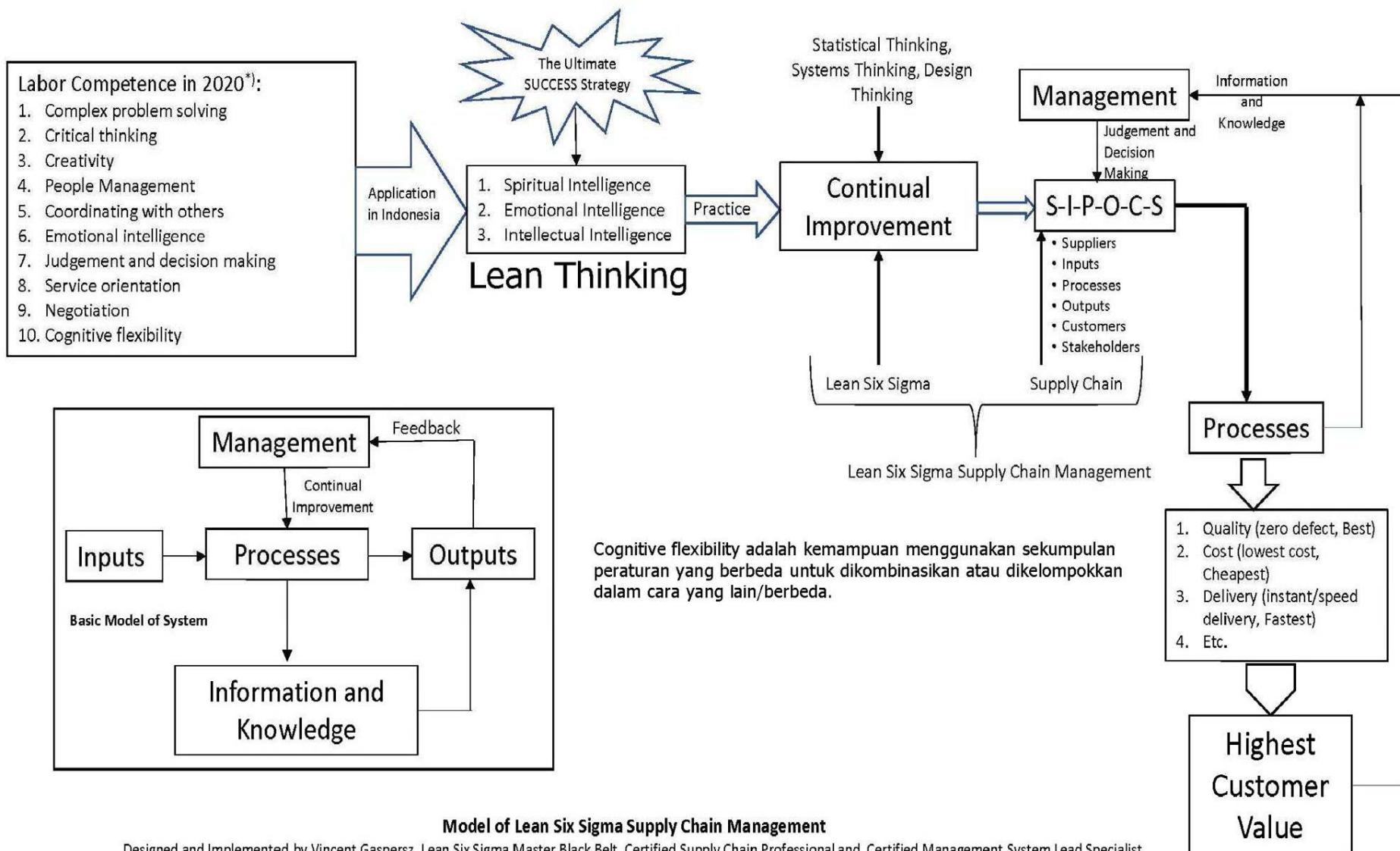
- Selalu menggunakan pendekatan sistem baik yang berkaitan dengan Systems Thinking maupun Systems Dynamics.
- Mentransformasikan proses-proses inti dalam sistem manajemen bisnis ke dalam diagram-diagram alir (flowcharts).
- Mendefinisikan dan menyebarluaskan analisis-analisis strategik menggunakan Strategic Thinking.
- Menetapkan sistem pengukuran kinerja yang bersifat kuantitatif maupun kualitatif kemudian berfokus pada pengelolaan indikator-indikator kinerja utama (Key Performance Indicators).
- Melakukan studi-studi benchmarking, termasuk umpan balik (feedback) dari karyawan (pelanggan internal), pelanggan eksternal, pemegang saham, dan masyarakat agar dipergunakan sebagai umpan-maju (feed forward) dalam perbaikan terus-menerus kinerja manajemen bisnis kelas dunia.
- Melakukan berbagai eksperimentasi untuk mengoptimalkan kinerja sistem bisnis kelas dunia.

Ringkasan dan Kesimpulan

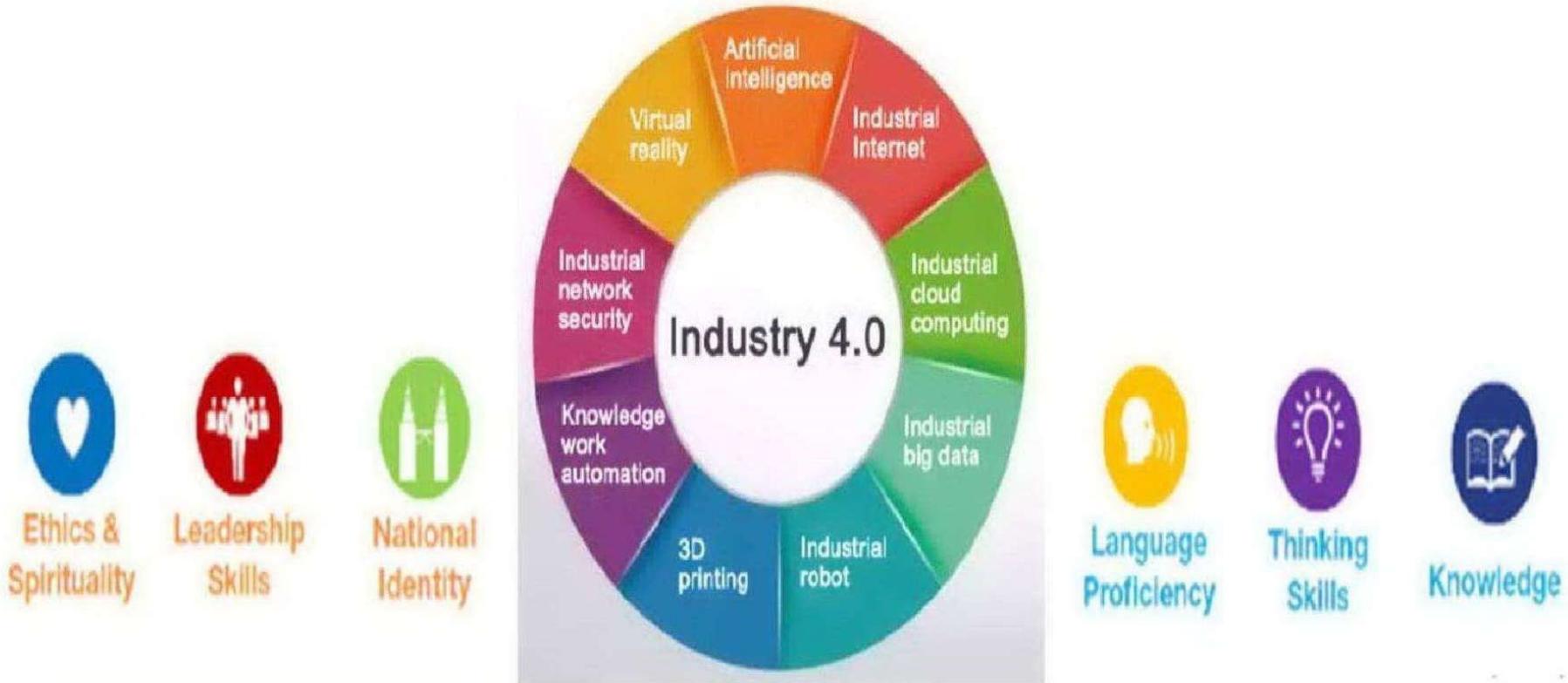
90% of
problems in
business are caused
by management,
10% by the
workman.

- F.W. Taylor

Model of Lean Six Sigma Supply Chain Management



^{*)} Labor Competence in 2020 based on the World Economic Forum, 2016 Report. The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution—Top 10 Skills Important in the Workforce



AKHLAK (Ethics and Morality)

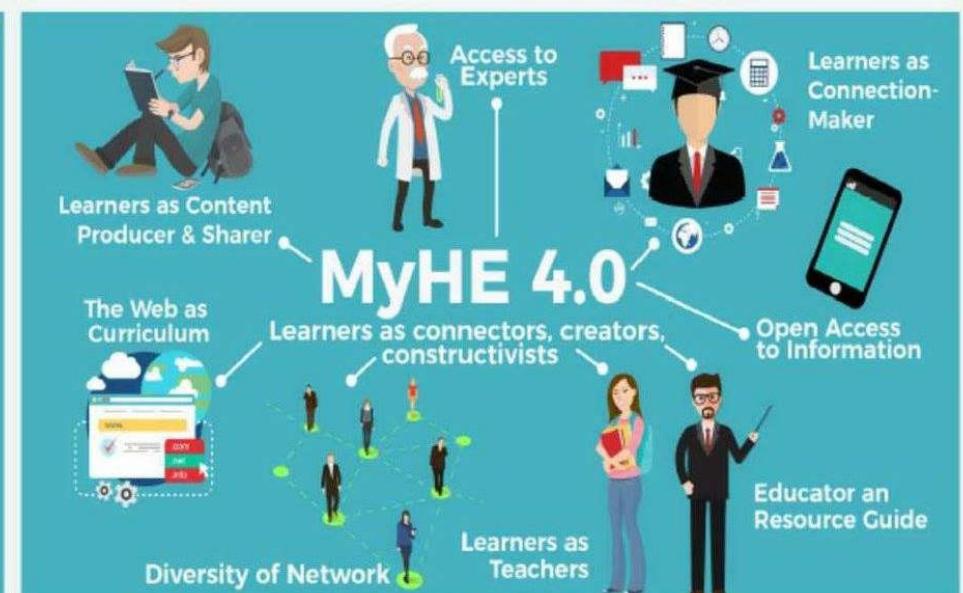
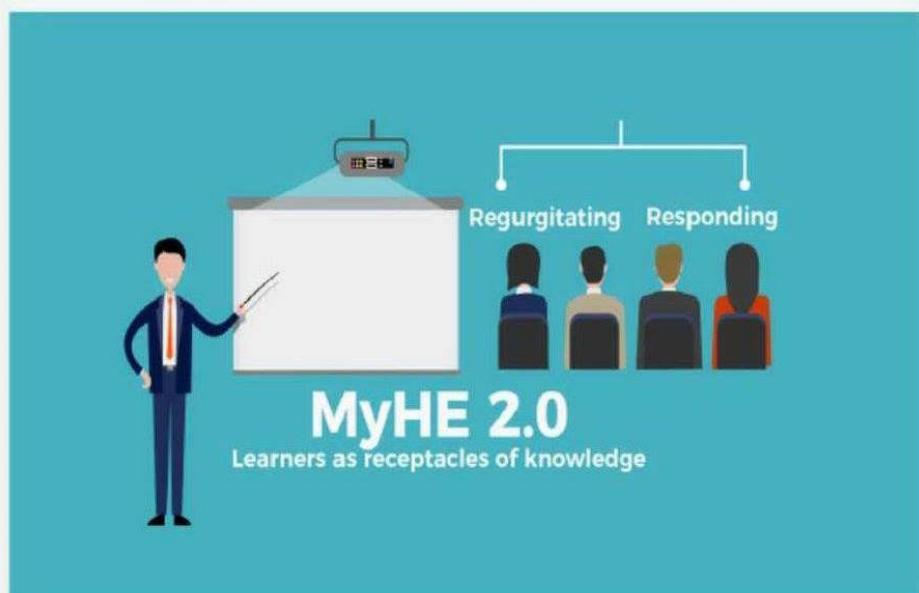
ILMU (Knowledge and Skills)

BALANCE

21st Century Curriculum for MyHE 4.0

Source: Datin Paduka Ir. Dr. Siti Hamisah Tapsir Director General Department of Higher Education Ministry of Higher Education 11 September 2017, Malaysia Higher Education 4.0. Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt & Certified Management Systems Lead Specialist.

Delivery of Higher Education



Source: Tapsir, Siti Hamisah. 2017. Malaysia Higher Education 4.0., Directorate General Department of Higher Education, Ministry of Higher Education. Cited by Vincent Gopora, Lean Six Sigma Master Black Belt and Certified Management System Lead Specialist

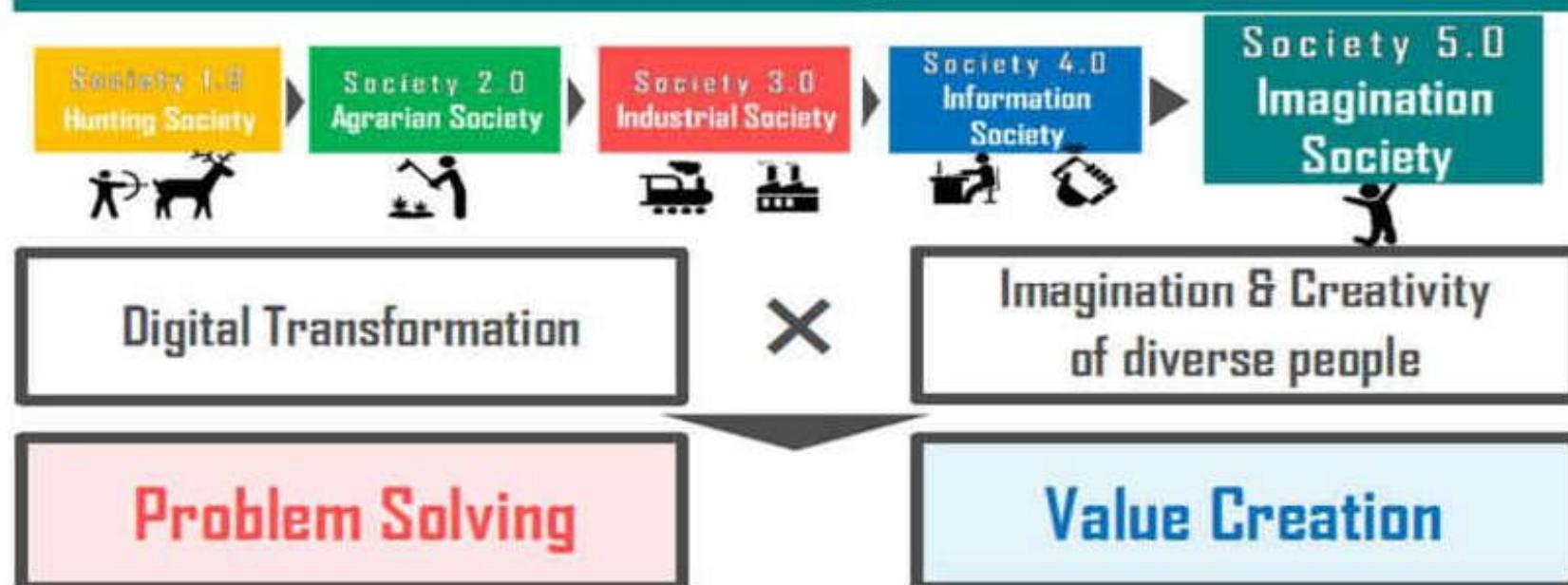
Mengapa Berpikir Sistem (System Thinker)?

The Nature of Society 5.0

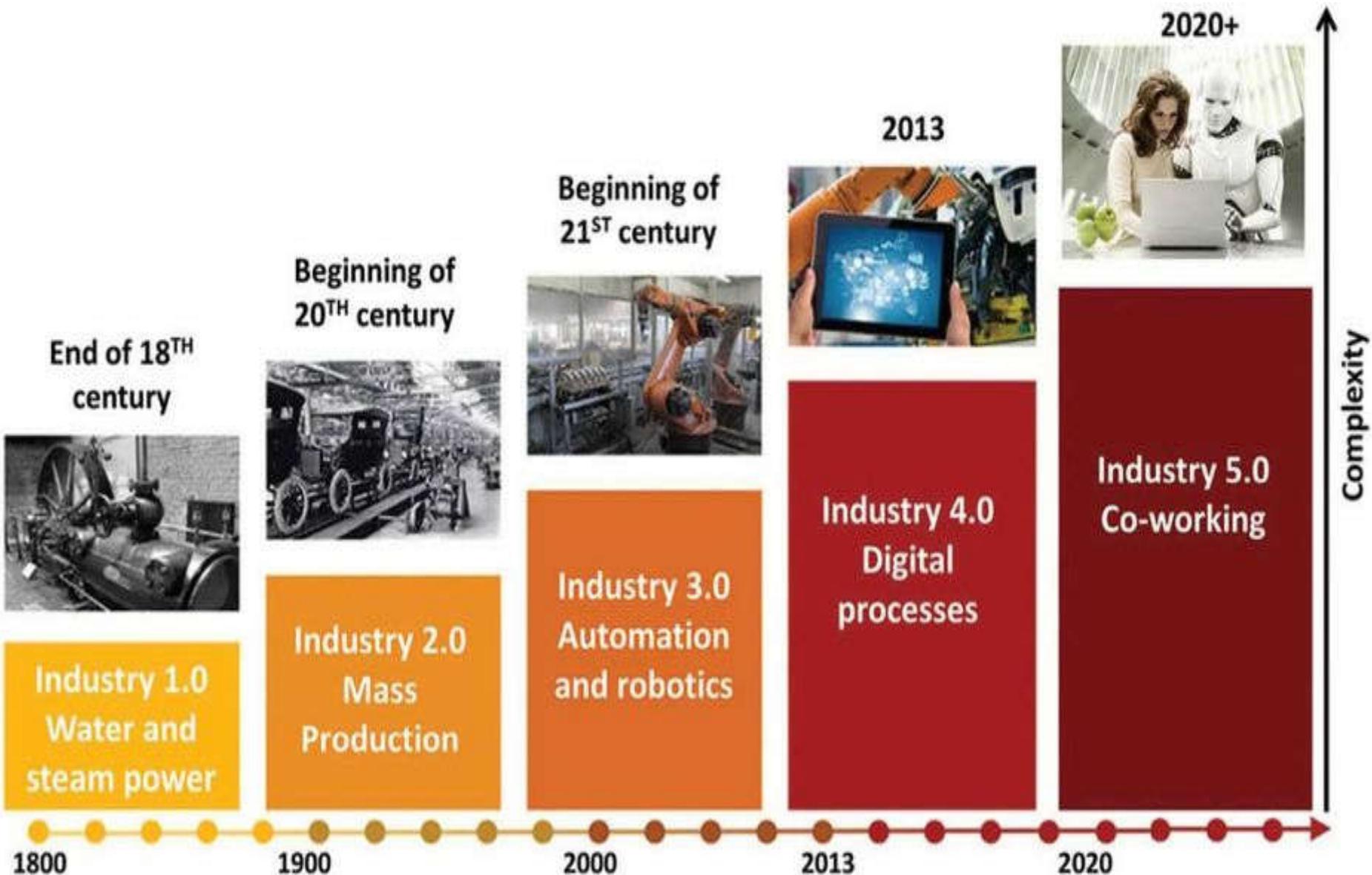
Keidanren
Policy & Action

- Digital technologies and data should be utilized to create a society where people lead diverse lifestyles and pursue happiness in their own ways. In the future, humans will require imagination to change the world and creativity to materialize their ideas. Society 5.0 will be an Imagination Society.

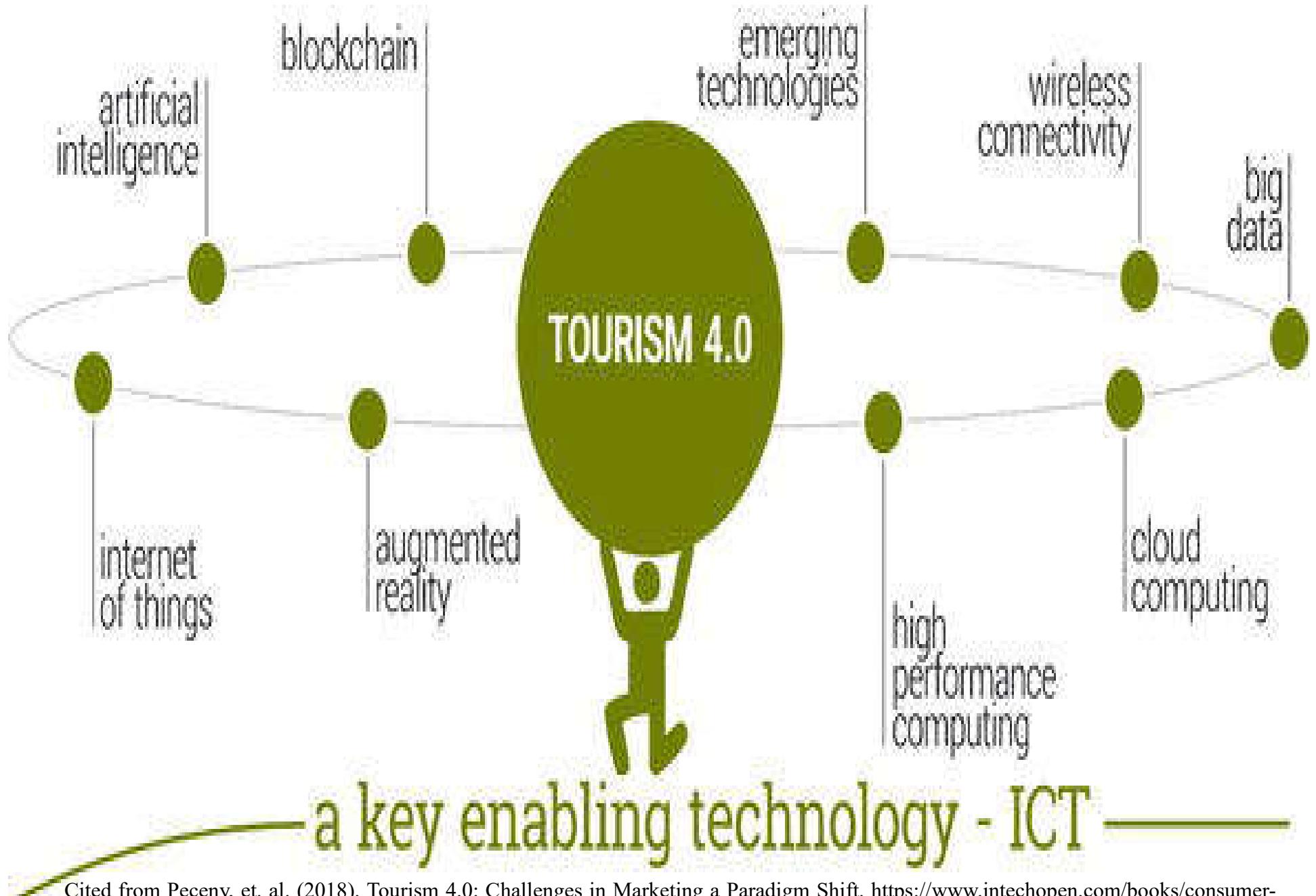
Society 5.0



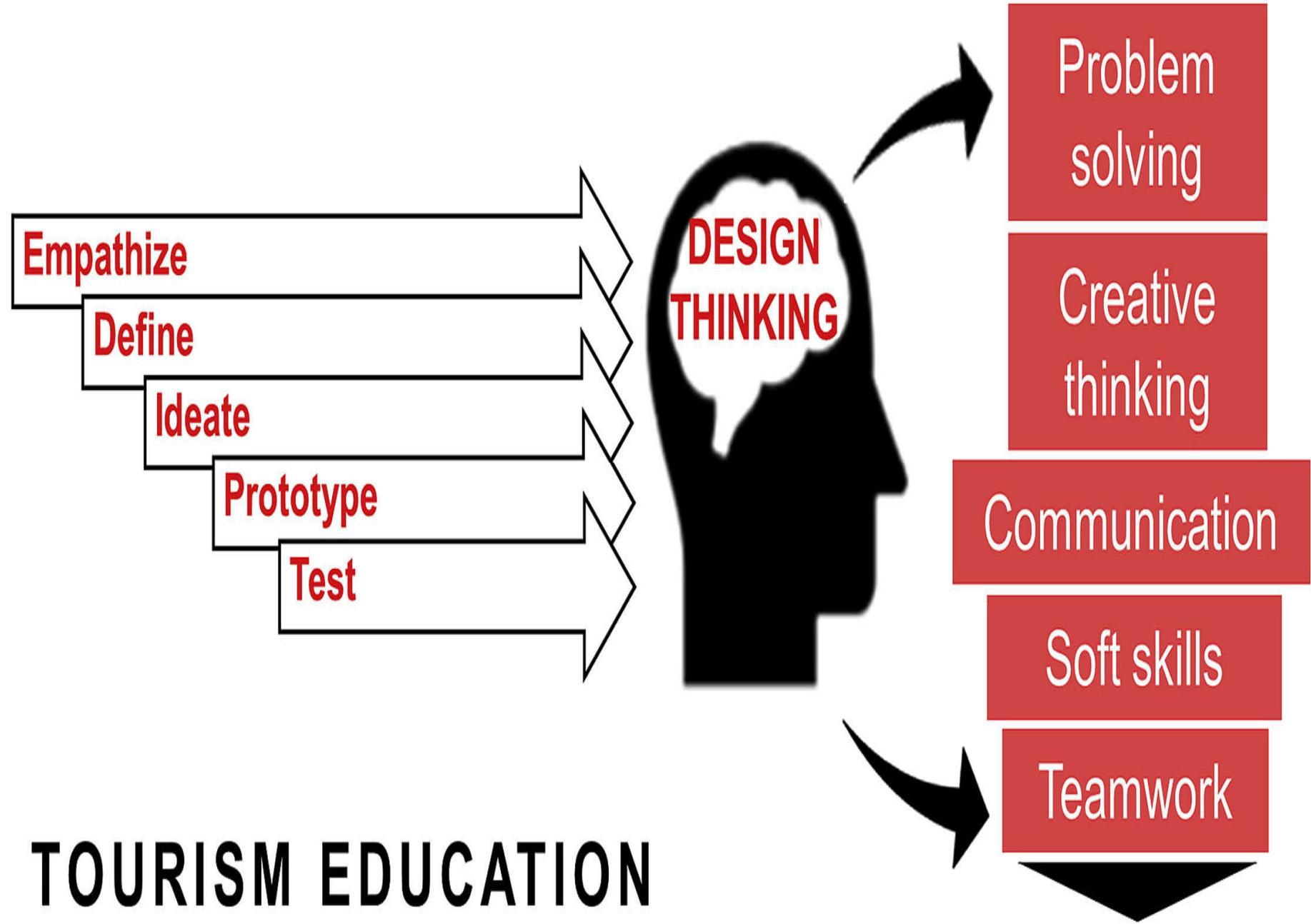
Source: Keidanren, 2018. Policy and Action: Society 5.0, Co-Creating the Future. Cited by Vincent Gaspersz, Lean Six Sigma Master Black Belt and Certified Management Systems Lead Specialist



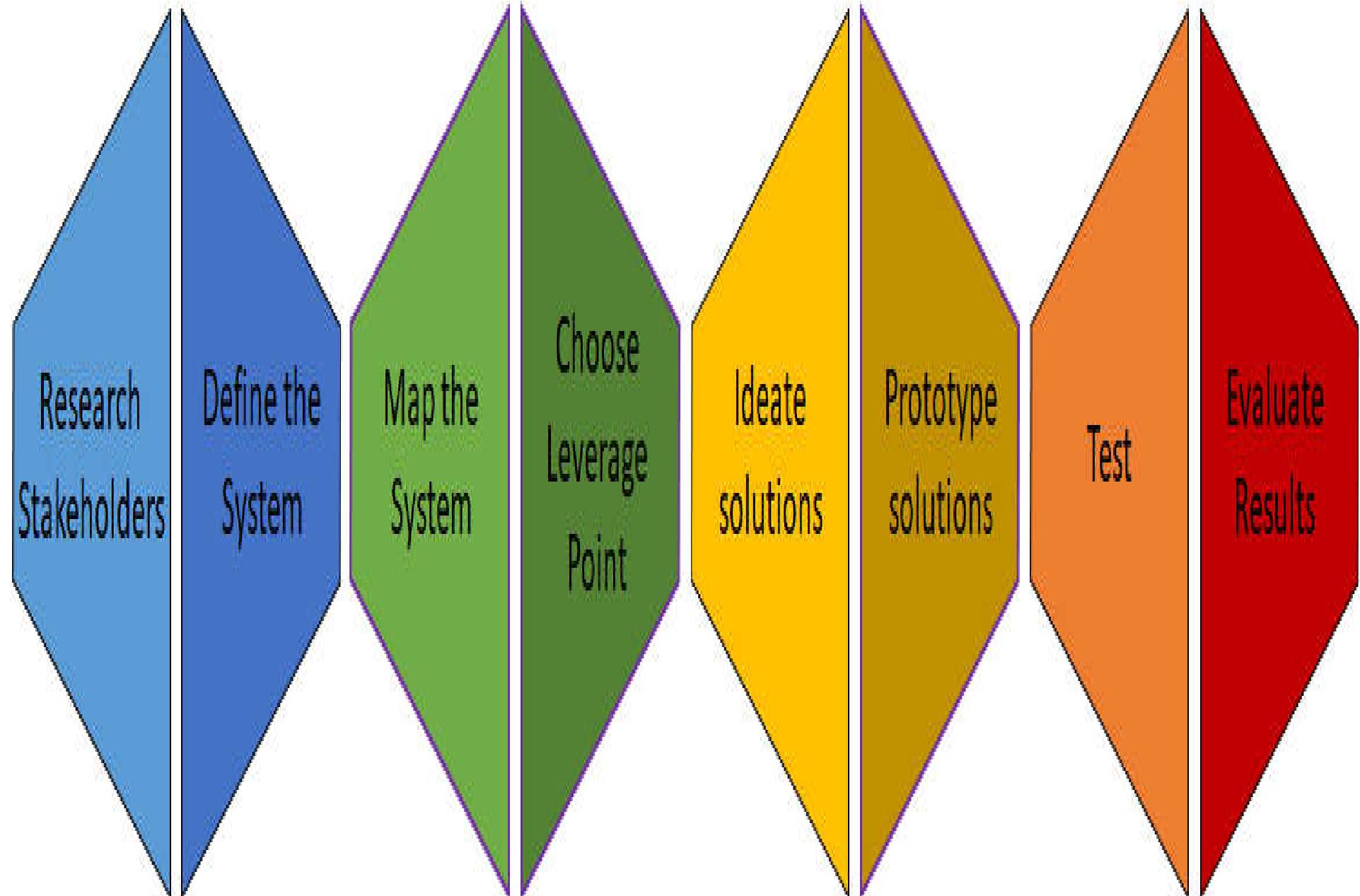
Industrial revolutions.



Cited from Peceny, et. al. (2018). Tourism 4.0: Challenges in Marketing a Paradigm Shift. <https://www.intechopen.com/books/consumer-behavior-and-marketing/tourism-4-0-challenges-in-marketing-a-paradigm-shift>



Cited from Sandorova, et. al (2020). Design Thinking—A Revolutionary New Approach in Tourism Education? Downloaded from <https://www.sciencedirect.com/science/article/pii/S1473837619300425>



Cited from Ospina (2018). Beyond Design Thinking: The Systemic Design Thinking Framework. <https://conductal.medium.com/beyond-design-thinking-the-systemic-design-thinking-framework-8d4952271222>

