Systemic Design Thinking Skills in Tourism Industry & Education

(Keterampilan Berpikir Desain Sistemik dalam Industri Pariwisata & Pendidikan)

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Systemic Design Thinking Skills in Tourism Industry & Education

1. Design Thinking
2. Systems Thinking
3. Statistical Thinking
What is Design Thinking?
TOURISM EDUCATION

Fig. 1. Design thinking process (Hoover, 2018).

Systems thinking  
What was?  
Design thinking  
What is?  
What can be?

Analyse and understand

Events
What happened?

Patterns
What is happening over time?

Structures
What is enabling this pattern to continue?

Mental Models:
In what ways our mental models created or sustained the structures that are in place?

Innovate and transform

Source: https://id.pinterest.com/pin/262545853257386847/
Design Thinking (Berpikir Desain):

- **Berkonsentrasi 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.

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.

Systems Thinking (Berpikir Sistem):

- **Berkonsentrasi 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.
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.

The Kaizen Flag: Involving People at All Levels

INNOVATION

Design Thinking

IMPROVEMENT

P.D.C.A.

STANDARDIZATION

S.D.C.A.

Time

Management

Leaders’ Kaizen & Innovation

Middle Management

Project Kaizen Process Improvement

Supervisors

Front Line

Daily Kaizen Teams Improvement

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

Source: Kaizen Institute.
Twiss’s ‘Egg’ model of innovation

Market Value

Financial Capital

Intellectual Capital

Human Capital

Structural Capital

Customer Capital

Organisational Capital

Innovation Capital

Process Capital

Intellectual Capital
“The intangible resources of an organisation”

Human Capital
“What the single employee brings into the value adding processes”

Relational Capital
“The relations of the company to external stakeholders”

Spiritual Capital
“What happens between people, how people are connected within the company, and what remains when the employee leaves the company”

Structural Capital


Catatan VG: Nilai dari Structural Capital beserta komponennya SANGAT RENDAH di Indonesia
Figure: Worker Evolution

INNOVATION

DOING THE SAME THINGS A BIT BETTER

DISRUPTION

DOING NEW THINGS

MAKING THINGS THAT MAKE THE OLD THING OBSOLETE

DISRUPTIVE TECHNOLOGY

Performance

MOST DEMANDING USE
HIGH QUALITY USE
MEDIUM QUALITY USE
LOW QUALITY USE

Time

Upgrading Digital Marketing Strategy

From Marketing 1.0 to Marketing 4.0

Marketing 1.0
Meet Customers’ Needs

Marketing 2.0
Attract Clients’ Interests

Marketing 3.0
Echo With Customers’ Expectations

Marketing 4.0
Help Clients To Realize Self-Value

History of the evolution of marketing.

Source: Philip Kotler’s Speech at the 2015 World Marketing Summit, Tokyo.
The marketing process

Customer value (benefits/solutions) flows from the organisation to the customer

Communications

The organisation

Information

The customer

Organisational value (Money) flows from the customer segment to the organisation

Source: Philip Kotler’s Speech at the 2015 World Marketing Summit, Tokyo.
What is Systems Thinking?
Shifting View of the World
(4.5 Billion Years Old)
Through Changing Thought Patterns

1. Hunt and Gather
   35–50,000 Years Ago

2. Agricultural Age
   12,000 Years Ago

3. Industrial Age
   250 Years Ago

4. Information Age
   Information

5. Systems Age
   Unconscious

Bridge

Conscious

Shift/Leap

Ecological

Which is it for you?

1. Left to Right
   
   Linear (Analytical/Forward) Thinking

2. Right to Left
   
   System (Backwards/Circular/Synthetic) Thinking

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

“**Rallying Cry**” sebuah kata atau frase yang digunakan untuk membuat orang bergabung bersama untuk mendukung ide, tujuan, dll.

**“Organization as a System: Systems Thinking Approach”**

STRATEGIC THINKING: ABCs TEMPLATE
“The Simplicity of Systems Thinking”

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

**C**

Current State Assessments:
Where are we now (SWOT)?

**D**

System Throughput/Processes:
How do we get there (close the gap from C → A)?

**E**

Future Environmental Scan:
What will be changing in your future environment that will affect you?

Inputs → CORE STRATEGIES: TOP PRIORITY ACTIONS:

•
•
•
•
•
•

Opportunities

Strengths

Weaknesses

•
•
•
•

Threats

•
•
•
•

Feedback Loop/Measurements:
How will we know when we get there?

•
•
•
•

Desired Outcomes—
#1 Systems Question:
Where do we want to be?

Outputs → A

Start Here

INTELLIGENCE INPUTS

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

What is Statistical Thinking?
All work is a process

Processes are variable

Analyze process variation

Develop process knowledge

Reduce variation & consistency

Change process

Improve results

Control process

Figure:
Steps in Implementing Statistical Thinking

The sign of the regression coefficient is opposed to the theory or concept

The regression coefficient is not significant (too small)

Satisfied:
- Employees
- Customers
- Shareholders
- Community

Linking Statistics Learning with World Class Business Management Needs

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

LOTSS = Lower Order Thinking Skills; MOTSS = 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:
1. Complex problem solving
2. Critical thinking
3. Creativity
4. People Management
5. Coordinating with others
6. Emotional intelligence
7. Judgement and decision making
8. Service orientation
9. Negotiation
10. Cognitive flexibility

The Ultimate SUCCESS Strategy

Application in Indonesia

1. Spiritual Intelligence
2. Emotional Intelligence
3. Intellectual Intelligence

Practice

Statistical Thinking, Systems Thinking, Design Thinking

Continual Improvement

Lean Thinking

S-I-P-O-C-S

Management

Judgement and Decision Making

Information and Knowledge

Information and Knowledge

Lean Six Sigma Supply Chain Management

Processes

1. Quality (zero defect, Best)
2. Cost (lowest cost, Cheapest)
3. Delivery (instant/speed delivery, Fastest)
4. Etc.

Highest Customer Value

Cognitive flexibility adalah kemampuan menggunakan sekumpulan peraturan yang berbeda untuk dikombinasikan atau dikelompokkan dalam cara yang lain/berbeda.

Model of Lean Six Sigma Supply Chain Management

Designed and Implemented by Vincent Gasperza, Lean Six Sigma Master Black Belt, Certified Supply Chain Professional and Certified Management System Lead Specialist.

21st Century Curriculum for MyHE 4.0

Delivery of Higher Education

MyHE 1.0
Teachers - centred
Receiving
Receiving
Receiving

MyHE 2.0
Learners as receptacles of knowledge
Regurgitating
Responding

MyHE 3.0
Teacher as Facilitator
Collaboration

MyHE 4.0
Learners as Content Producer & Sharer
The Web as Curriculum
Learners as connectors, creators, constructivists
Open Access to Information

Mengapa Berpikir Sistem (System Thinker)?

**The Nature of Society 5.0**

- 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.

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**Society 5.0**

- **Society 1.0**: Hunting Society
- **Society 2.0**: Agrarian Society
- **Society 3.0**: Industrial Society
- **Society 4.0**: Information Society
- **Society 5.0**: Imagination Society

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**Digital Transformation** x **Imagination & Creativity of diverse people**

**Problem Solving**

**Value Creation**

Industrial revolutions.

Industry 1.0: Water and steam power (1800-1900)
Industry 2.0: Mass Production (1900-2000)
Industry 3.0: Automation and robotics (2000-2013)
Industry 4.0: Digital processes (2013)
Industry 5.0: Co-working (2020+)

Source: www.inTechopen.com Cited by Vincent Garpariz, Lean Six Sigma Master Black Belt and Certified Management Systems Lead Specialist
THANK YOU
YOU ARE AWESOME!