Singapore Institute of Manufacturing Technology
SIMTech

for Industry

POWERING BE PRODUCTIVITY WITH OMNI & READY-TO-GO SOLUTIONS

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26 August 2021

BE Industry – Challenges

The COVID-19 pandemic presents a serious threat to people, businesses and economies across the world.

Leaders must focus on how to best protect their people, serve their customers and stabilize business continuity.

- Accenture

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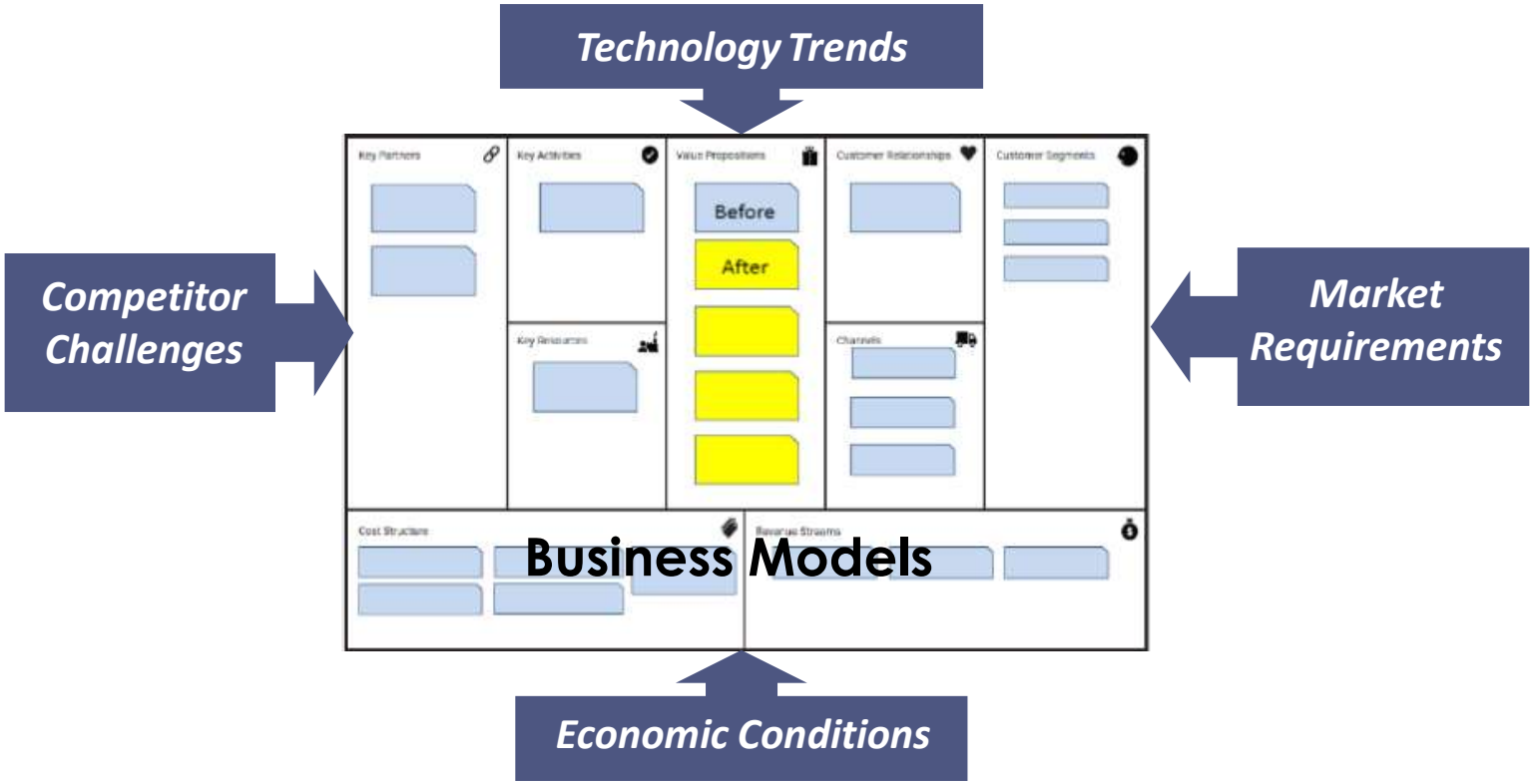
BE Industry – 4D Challenges

BE Industry subjected to 4D Challenges –
DIGITAL, DISPLACEMENT, DISRUPTION, and DESTRUCTION



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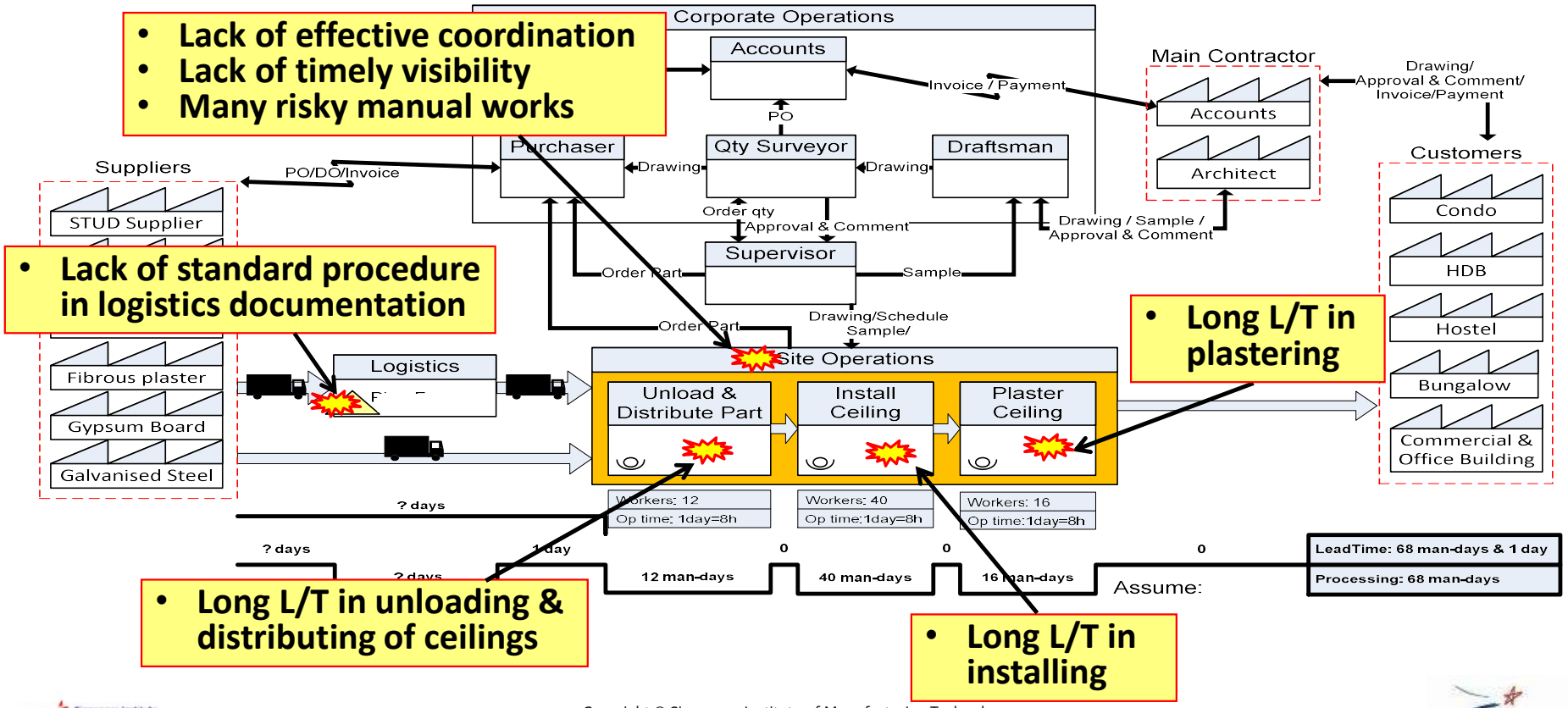
BE Industry – Challenges

Construction Site Operation



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BE Industry – Challenges

破茧成蝶

Break through a Cocoon
And Transform into a
Butterfly

Change our Thinking, Change our Habits
Breakout of our Self-Constructed Walls of Limitations
And Transform

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for Industry

BE Industry – Challenges

The only sustainable Competitive Advantage is an Organization's ability to Transform faster than the Environment.

An Organization ability to Learn, Unlearn and Relearn, translate into Action rapidly, is the ultimate Competitive Advantage.

An Organization does not get Better by Chance, it gets Better by Change.

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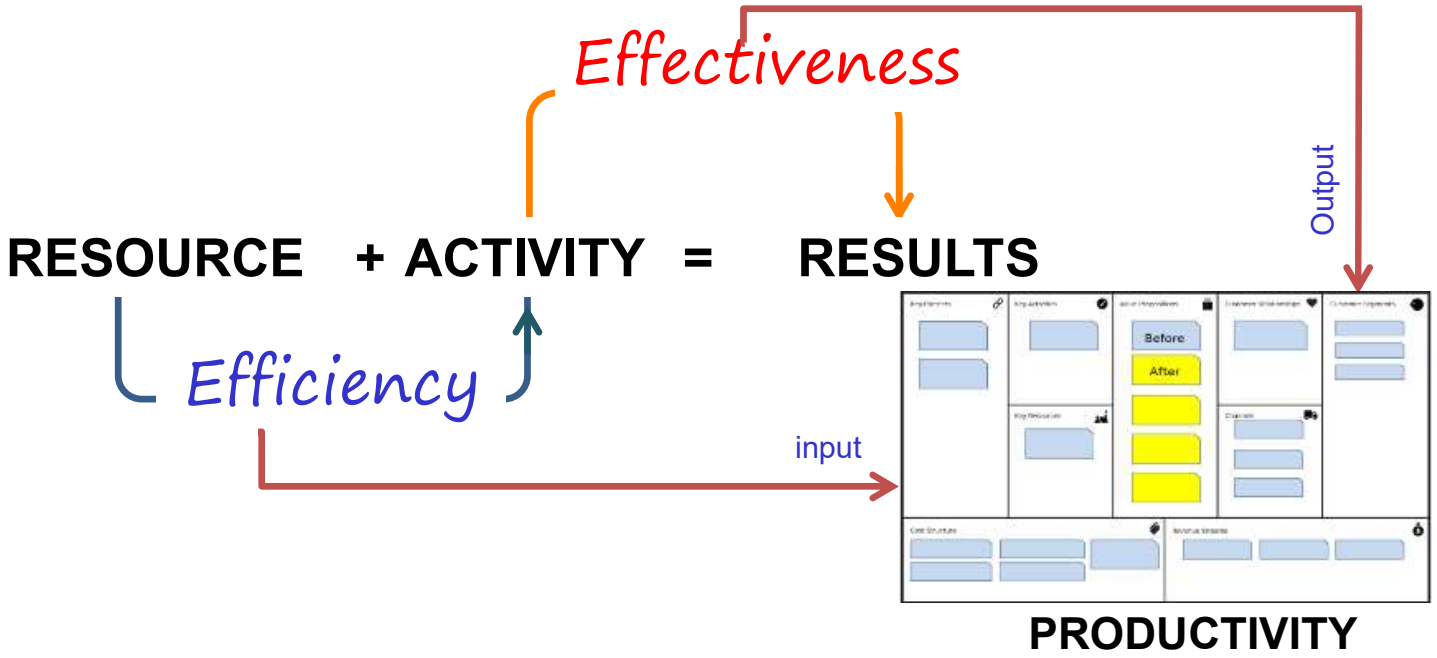
Efficiency and Effectiveness - 2E



Doing Things Right

Efficiency is a minimum condition for survival after success achieved.

Doing the Right Things

Effectiveness is the foundation of success

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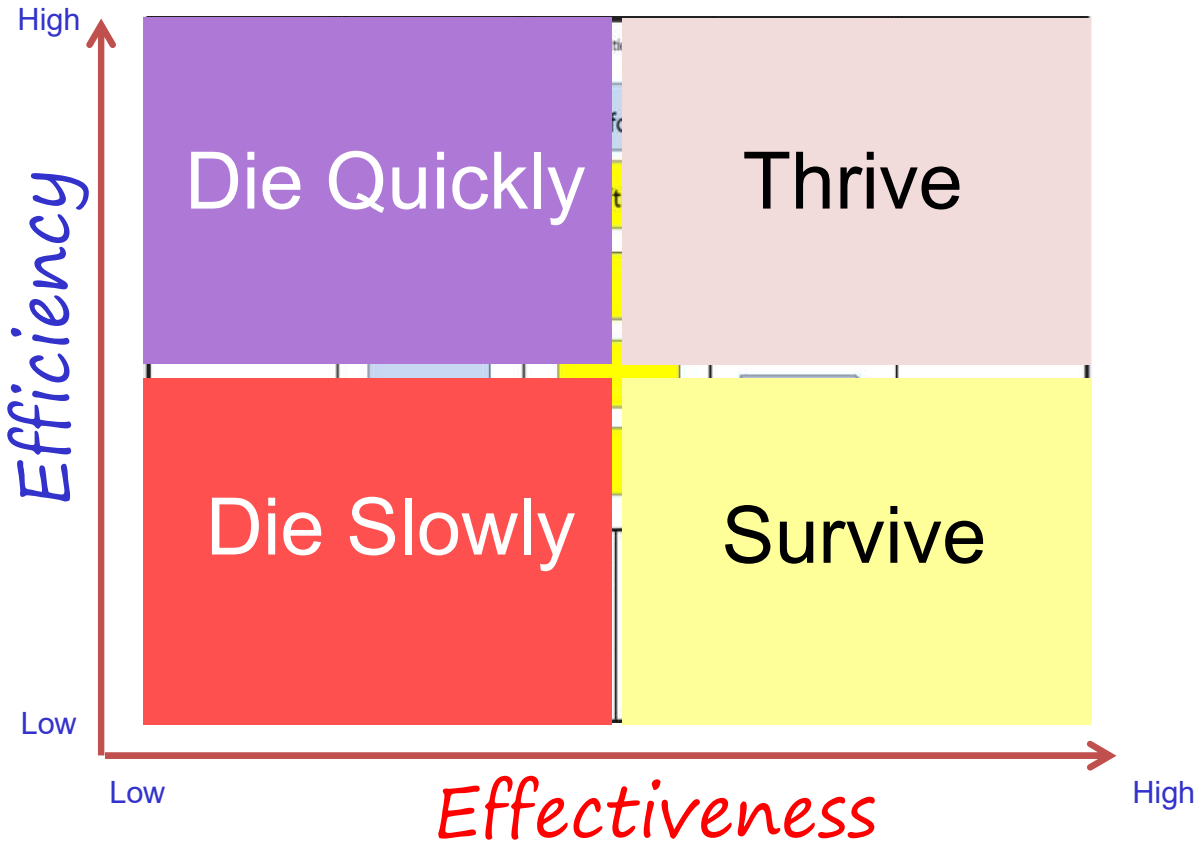
Efficiency and Effectiveness – 4Q (Quadrants)



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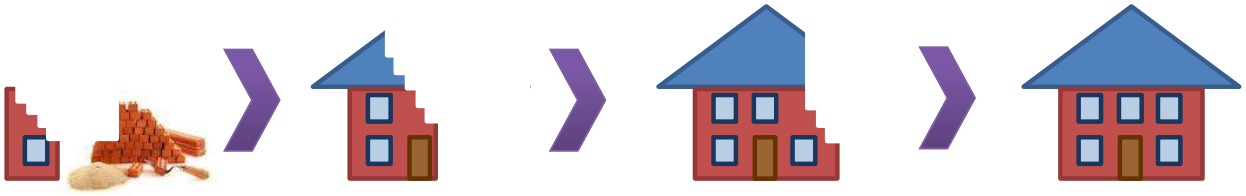
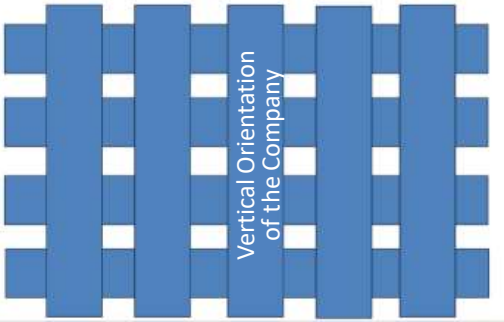
What lead to Low Effectiveness?

***POINT Improvement**: Improving one system at a time*



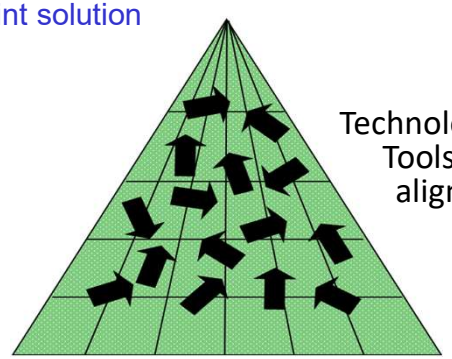
Functional Focus

FUNCTIONAL Departmental improvement goals more important than corporate



Technologies & Tools (Objectives)

NOT ALIGNED Narrow tool level application using specific methods to create point solution



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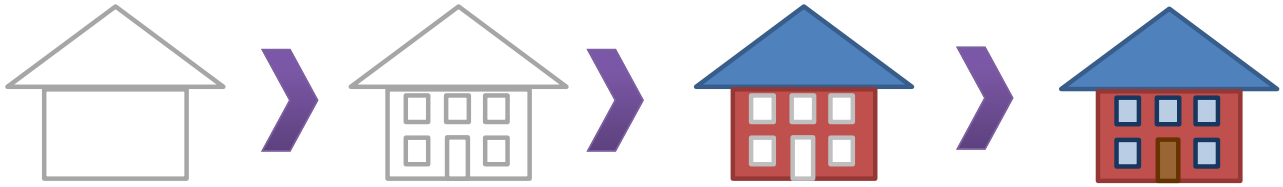
More Effective and Sustainable Approach

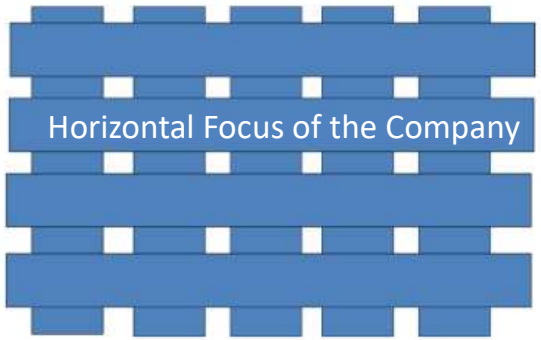
***SYSTEM Transformation**: Start with a System Framework*



Proactive, Holistic and **Total Value Chain Approach**
(Strategic Methodology)

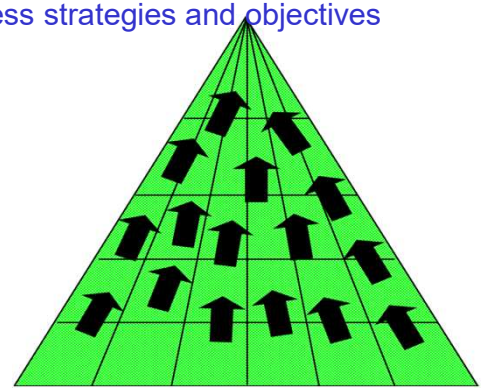
Business Focus

BUSINESS Corporate improvement goals more important than departmental



Technologies & Tools (Enablers)

ALIGNED Technologies & tools all aligned to business strategies and objectives



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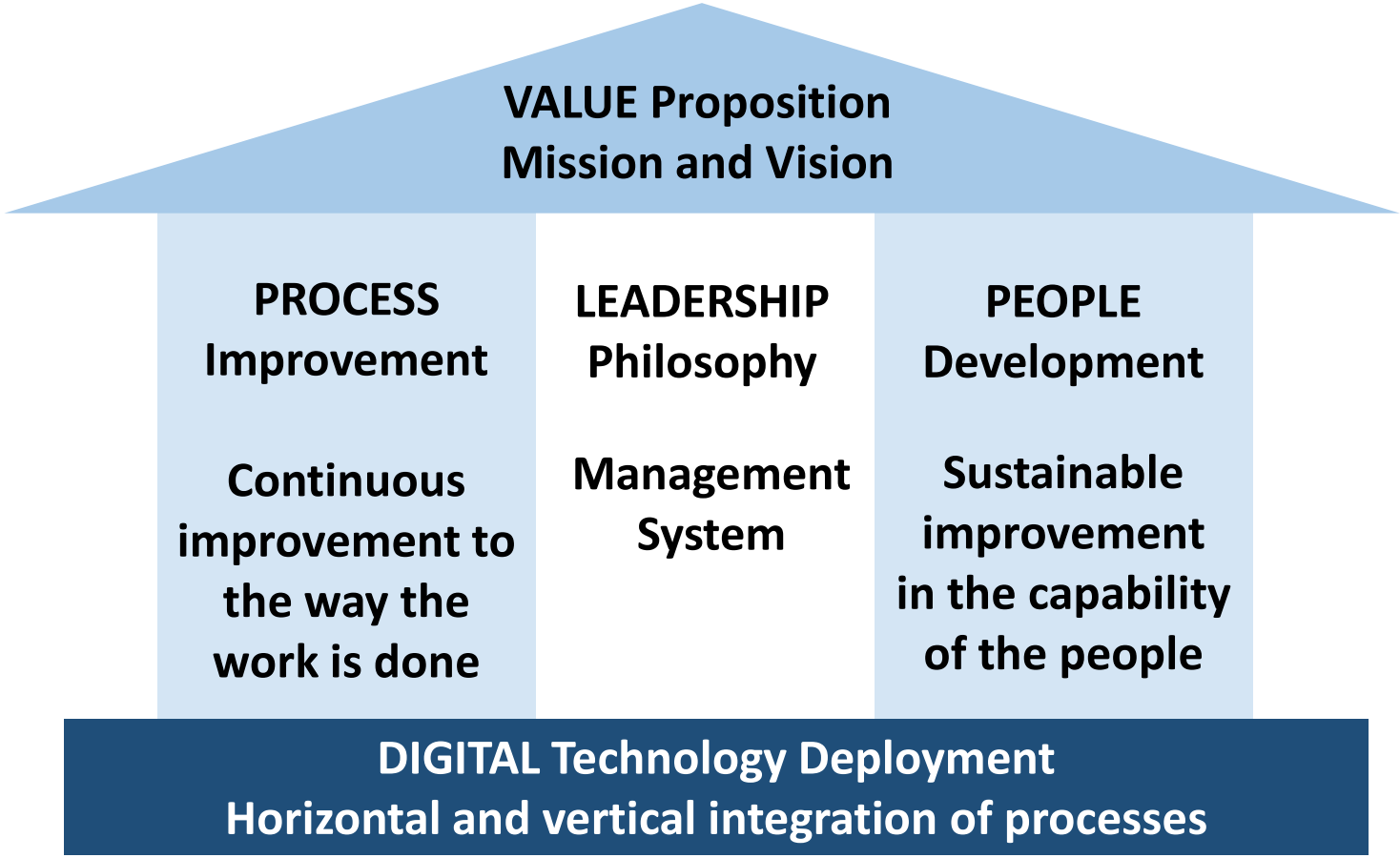
5 Pillars of Operational Excellence



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Operations Management Innovation (OMNI) Methodology

CREATING GROWTH, ENHANCING LIVES

Stage 1 — Determine

DETERMINE BUSINESS STRATEGY AND OBJECTIVES

Stage 2 — Identify

IDENTIFY ACTIVITY LANDSCAPE

Stage 3 — Improve

IDENTIFY IMPROVEMENT AREAS AND ASSESS PRODUCTIVITY

Stage 4 — Prioritize

GENERATE AND PRIORITIZE INITIATIVES

Stage 5 — Develop

DEVELOP ACTION PLAN

Strategy → **Action**

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- Identify improvement areas
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- Assess current productivity of improvement areas

- Generate initiatives
- Assess productivity indexes of improvement areas
- Prioritize initiatives

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- Establish duration and deliverables

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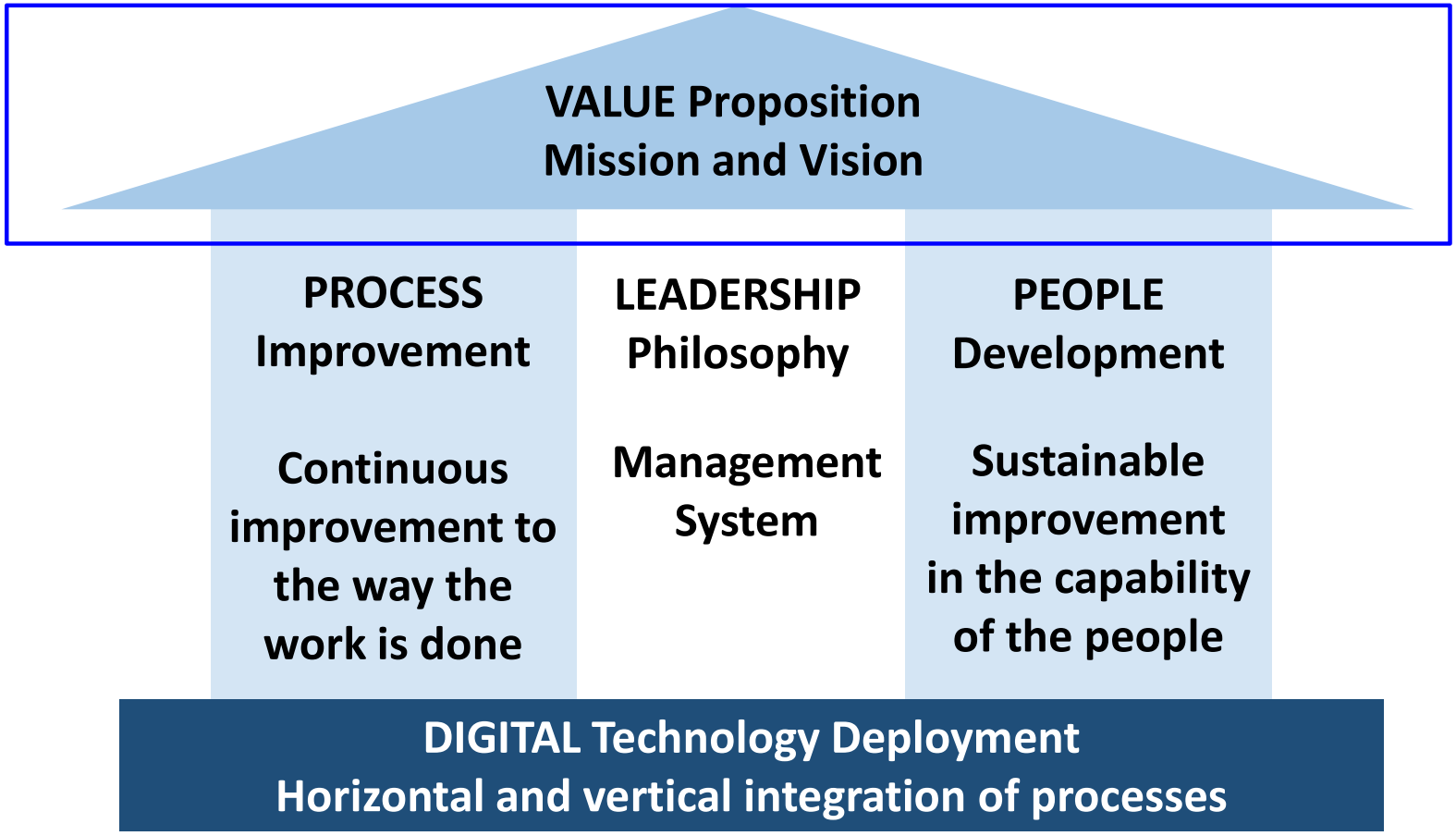
5 Pillars of Operational Excellence



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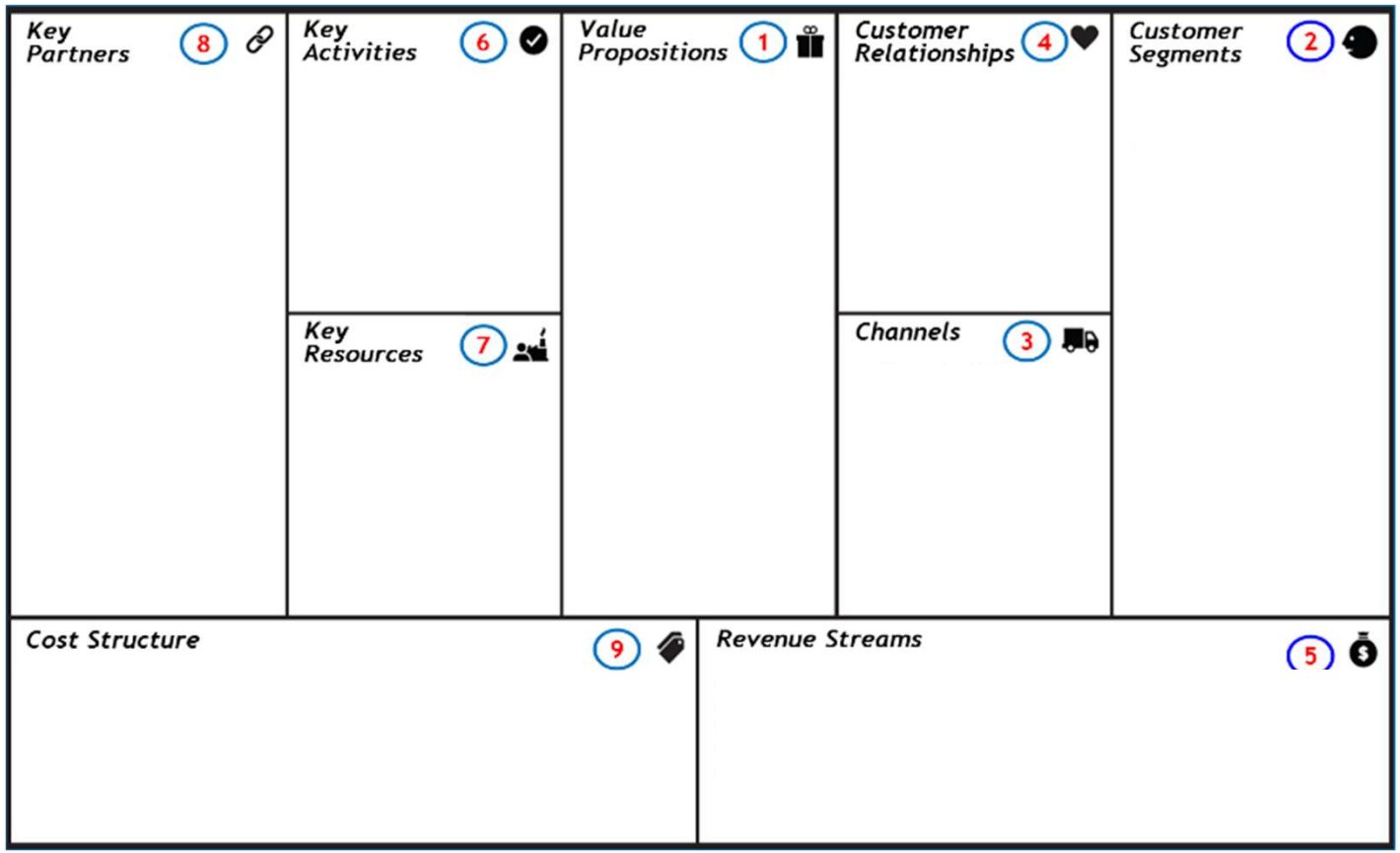
BUSINESS VALUE Proposition – Business Model



Source: Osterwalder

Business Model Canvas

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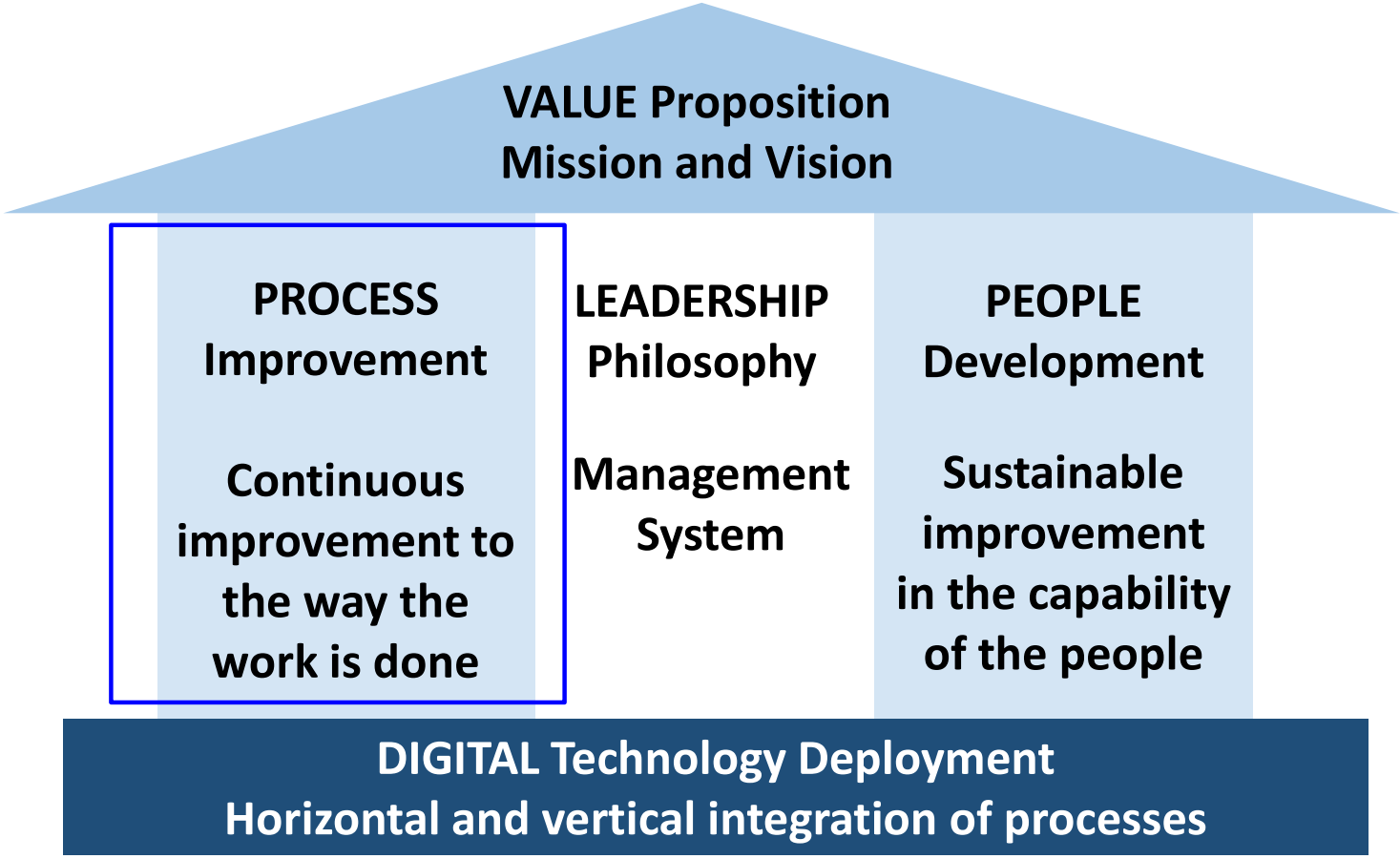
5 Pillars of Operational Excellence



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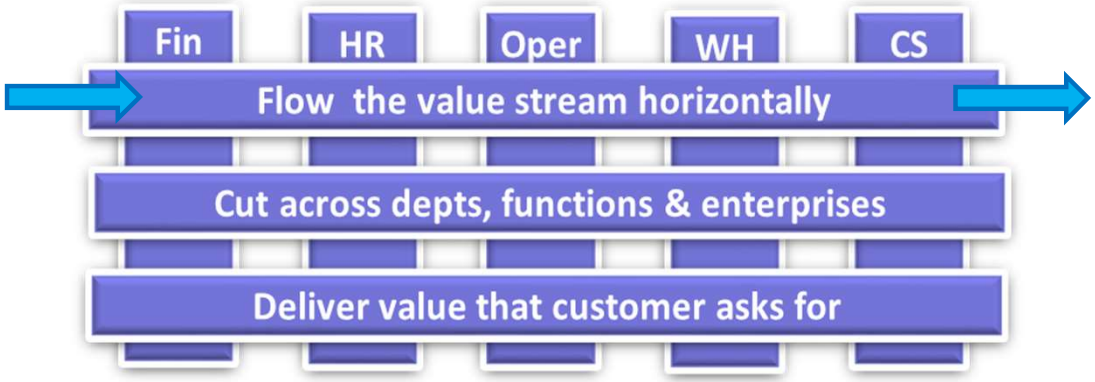
Horizontal Process Thinking

- Organizations are vertical – managers look up toward the top for direction
- Value flows horizontally across organizations to customers
- The Challenge lies in Seeing, Understanding, and Improving the horizontal value stream



Principles of Lean

1. Value
2. Value Stream
3. Flow
4. Pull
5. Perfection

If the ladder is not leaning against the right wall, every step we take just get us to the wrong place faster — Stephen Covey

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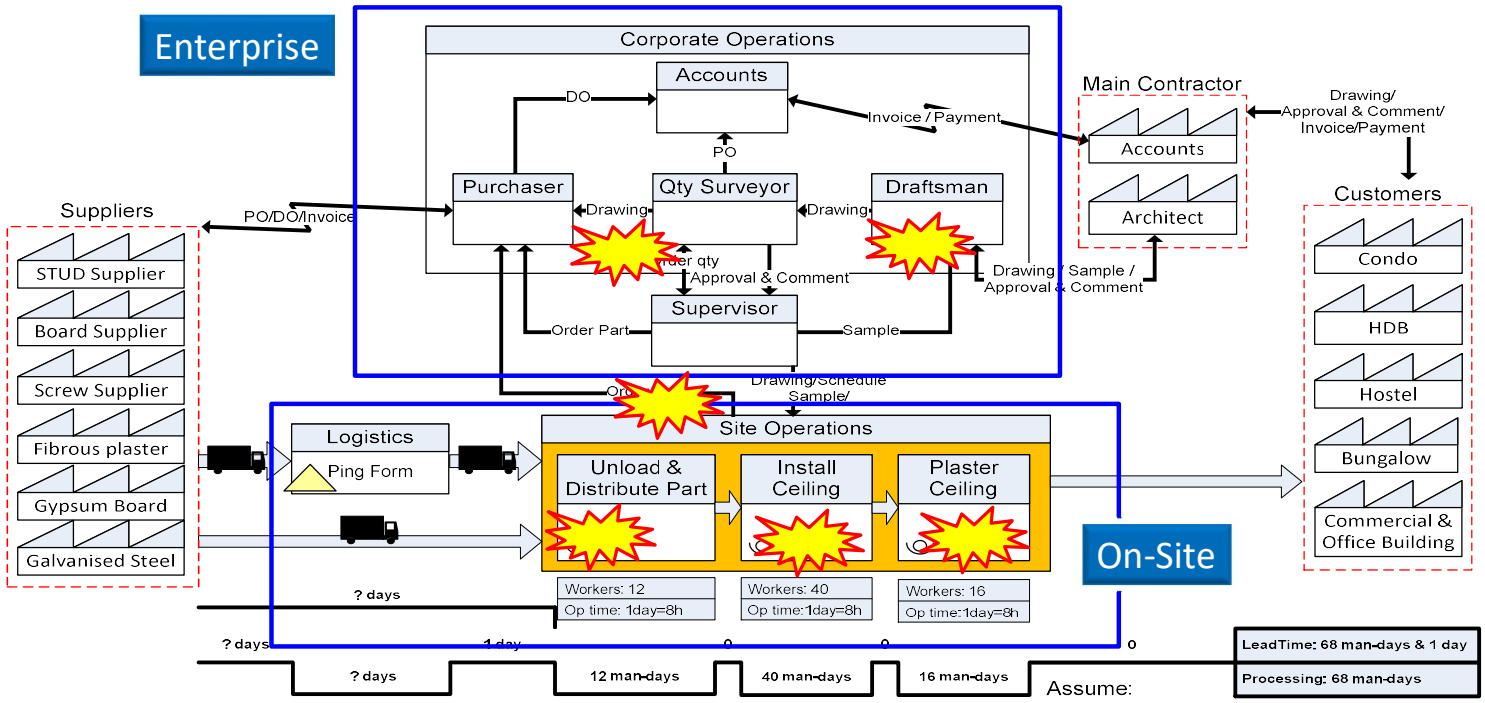
Value Stream Mapping

Using VALUE STREAM MAPPING to See the horizontal value stream, then Identify HOTSPOTS, and OPPORTUNITIES.



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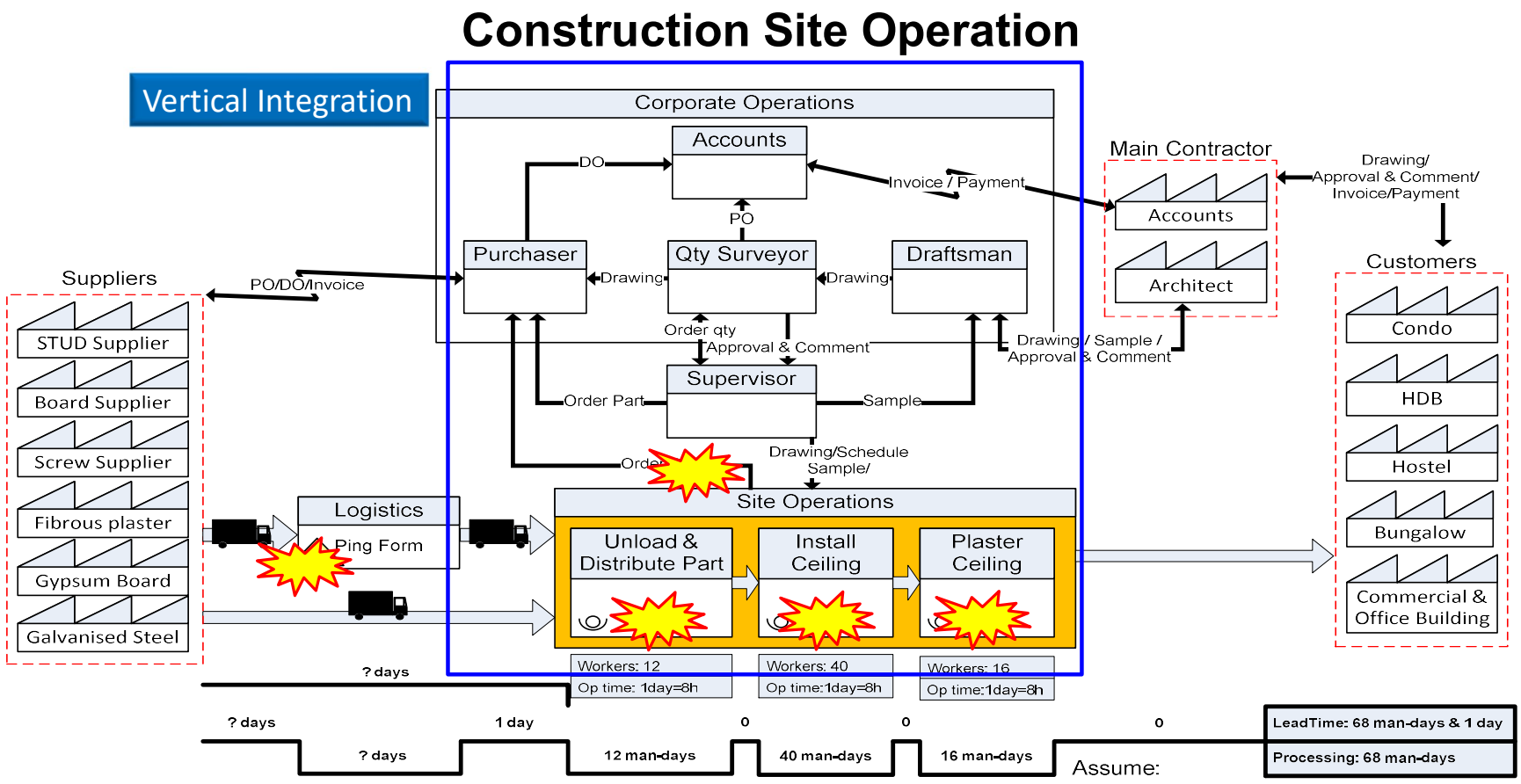
PROCESS Improvement



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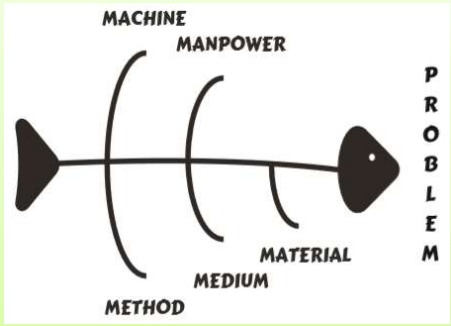
Lean Tools

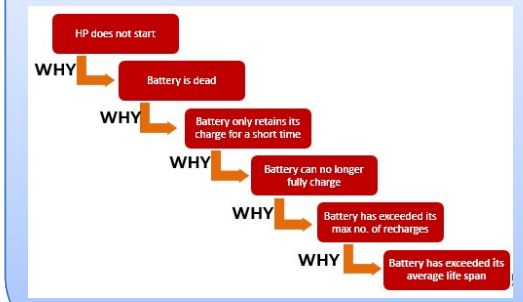
8 Wastes "DOWNTIME"

D	DEFECTS
O	OVERPRODUCTION
W	WAITING
N	NON-UTILIZED TALENT
T	TRANSPORTATION
I	INVENTORY
M	MOTION
E	EXTRA-PROCESSING

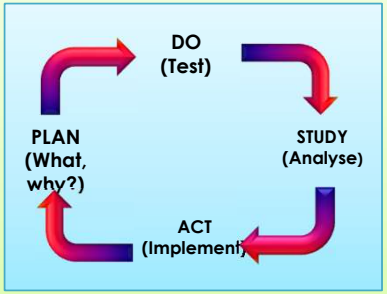
Ishikawa Cause & Effect Diagram



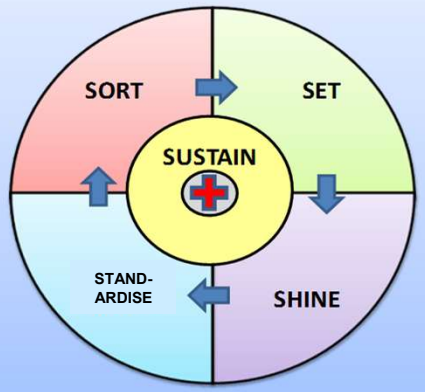
5 Whys



PDSA



6S



Standardisation
Visual Management
SMED
Line Balancing
POU
Kanban

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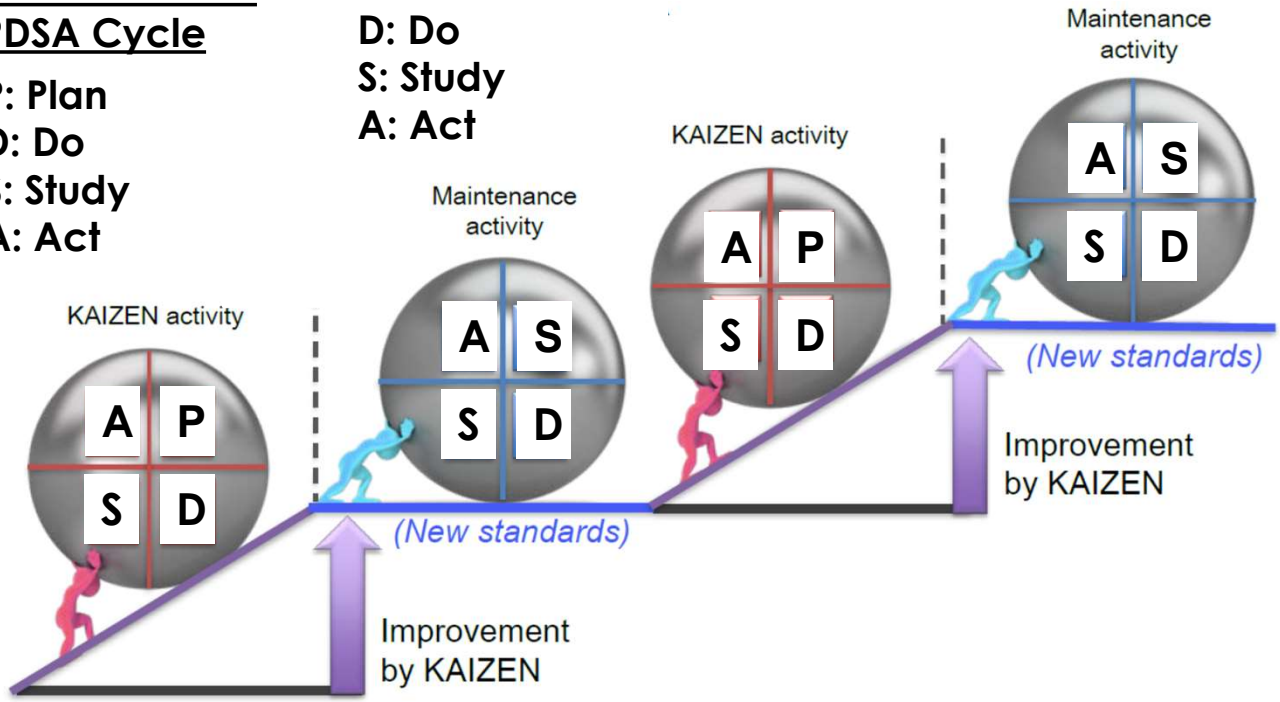
PDSA and SDSA Cycle

IMPROVEMENT
PDSA Cycle

P: Plan
D: Do
S: Study
A: Act

MAINTENANCE
SDSA Cycle

S: Standardize
D: Do
S: Study
A: Act



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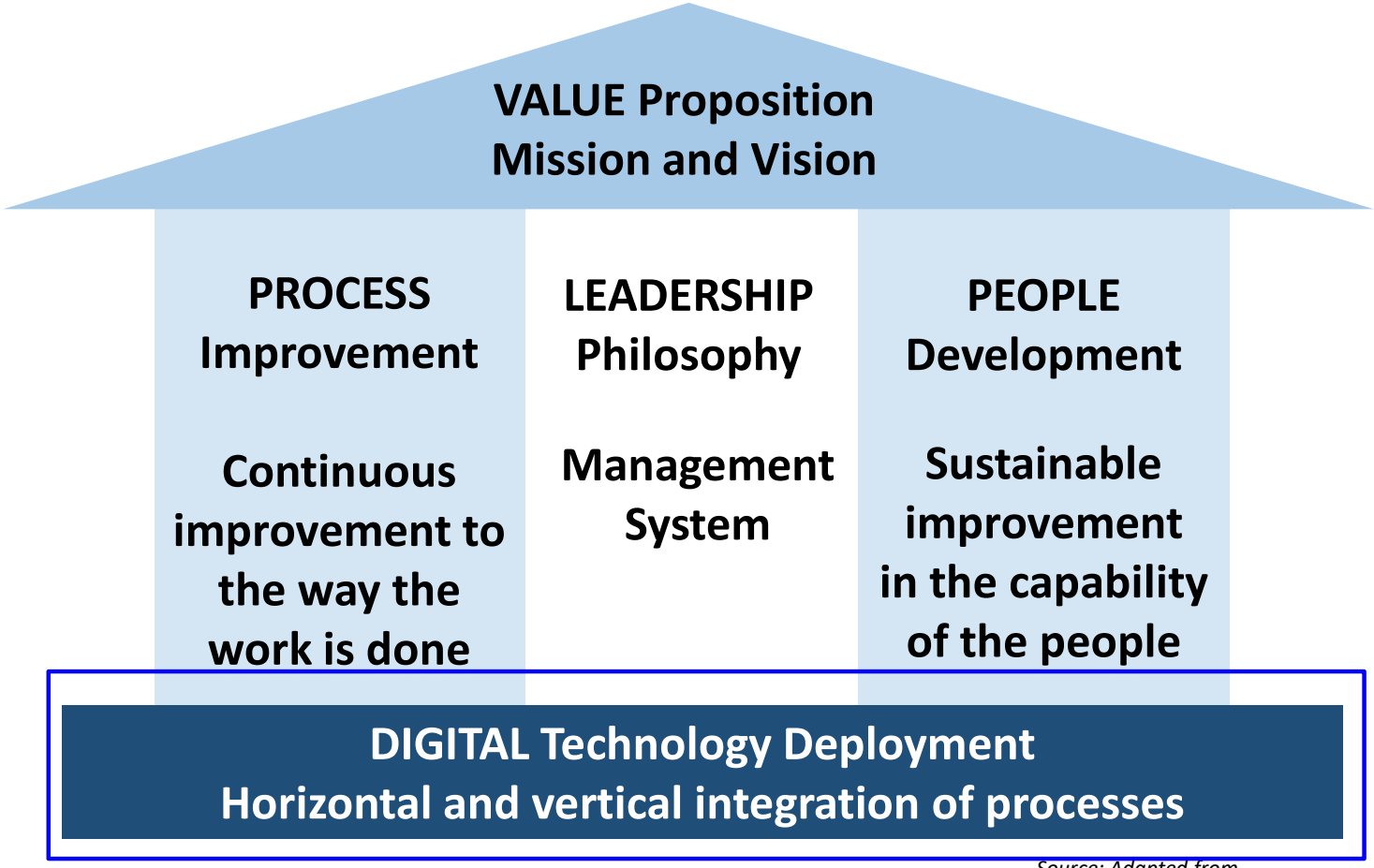
5 Pillars of Operational Excellence



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SIMTech DIGITAL Technologies

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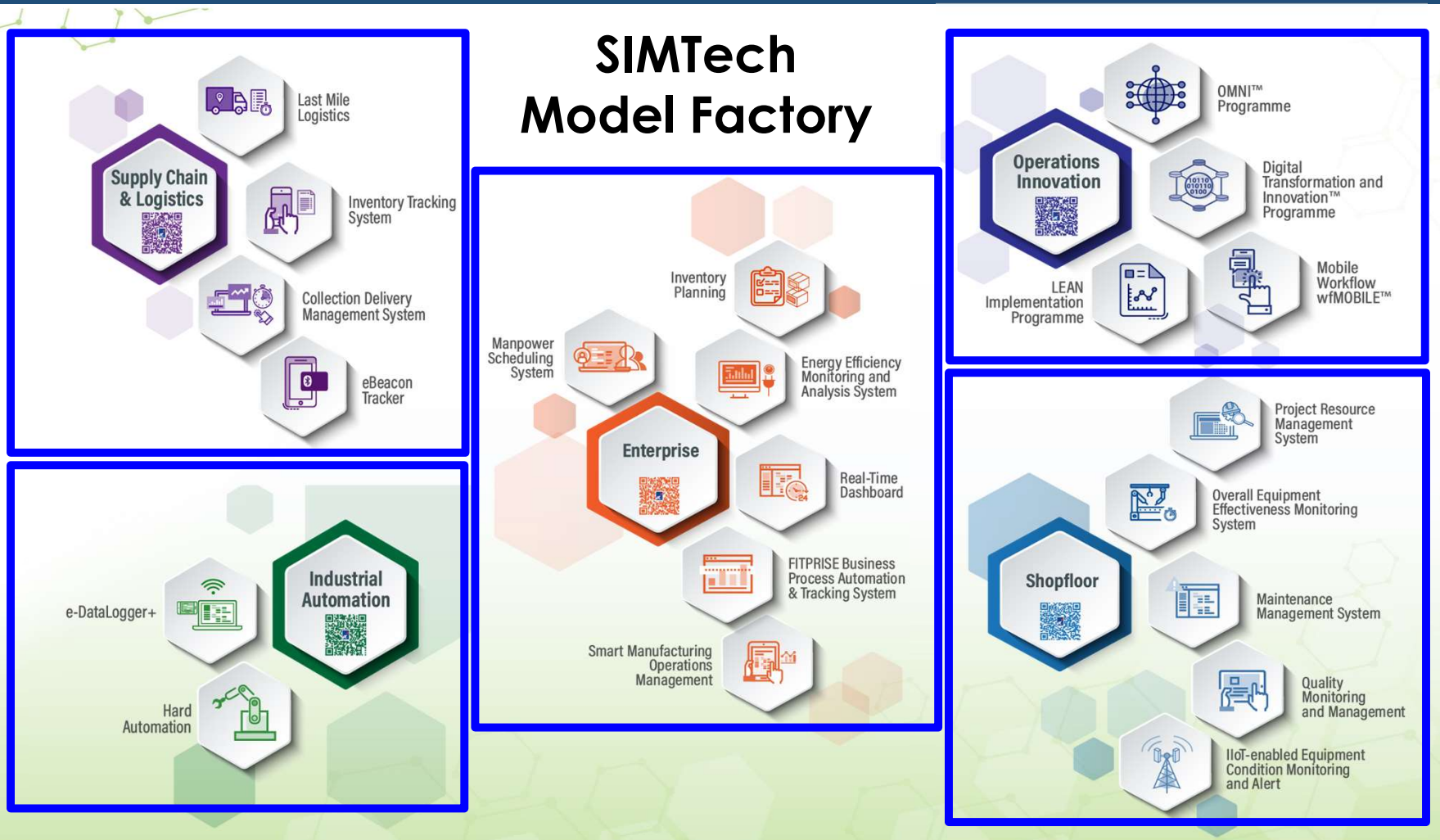
SIMTech Model Factory



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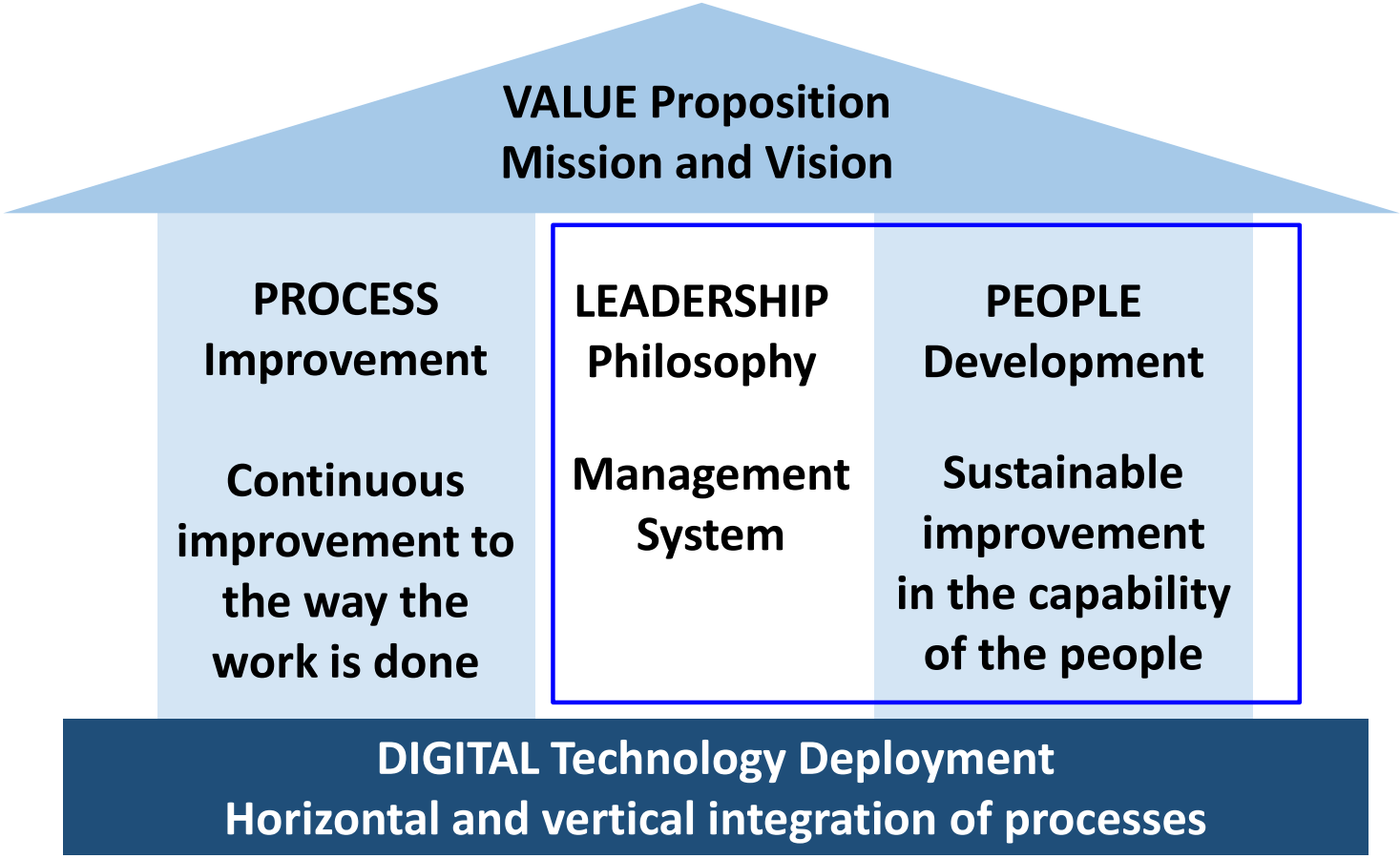

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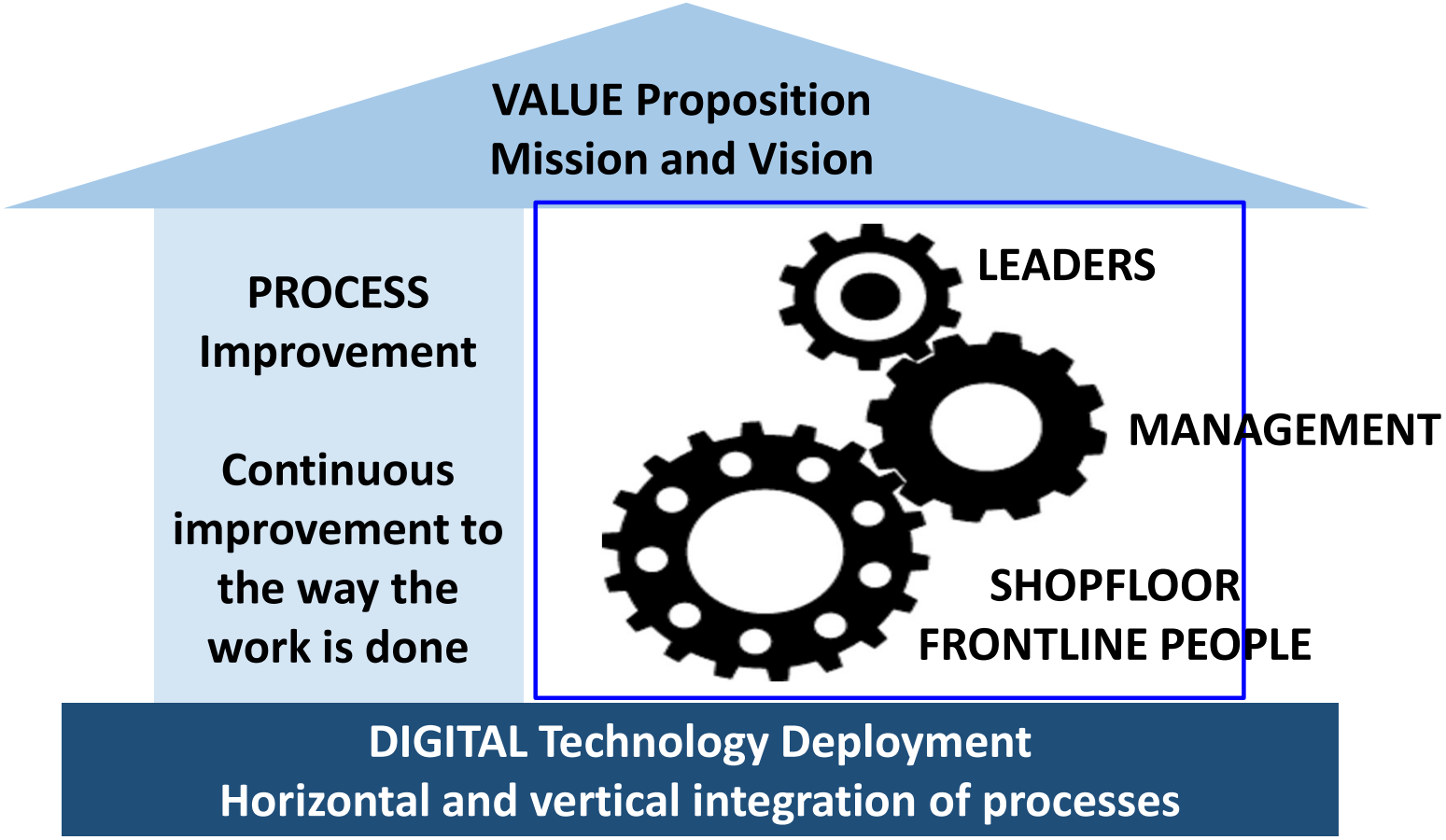
5 Pillars of Operational Excellence



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PEOPLE Development

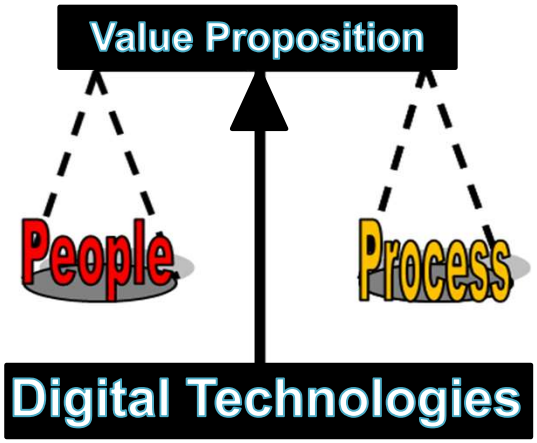
PEOPLE Development

Sustainable improvement in the capability of the people

先学做人，后学做事

Make Your People before You Make Your Process/Product

Digital Technologies Deployment is Process Improvement and People Development



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PEOPLE Development

先学做人，后学做事

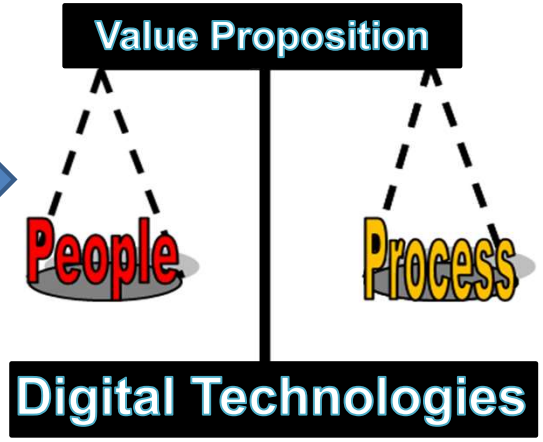
Make Your People before You Make Your Process/Product

People Point of View

INPUT
Mind-Set
Well-Being
Motivation
Engagement

BEING

Digital Technologies Deployment is Process Improvement and People Development



Company Point of View

OUTPUT
New Products
Quality
Quantity
Time

DOING

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PEOPLE Development – Job Redesign

Motivational

- Motivate employees and enhance jobs
- e.g. bored at job, doing repetitive tasks, job dissatisfaction

Mechanistic

- Improve Performance
  - Improve efficiency
  - Increase productivity

Biological

- Growth in number of Seniors at workplace
- Address employees stress, fatigue, physical strains
- e.g. Ageing workforce

Perceptual/Motor

- Address limitations, auto cruise or auto pilot
- New implementations (e.g. upgrade of equipment, systems)

Value Creation

- Change in business expectation
- Address evolving & changing needs in the business environment (e.g. disruption in technology, industry, economy)

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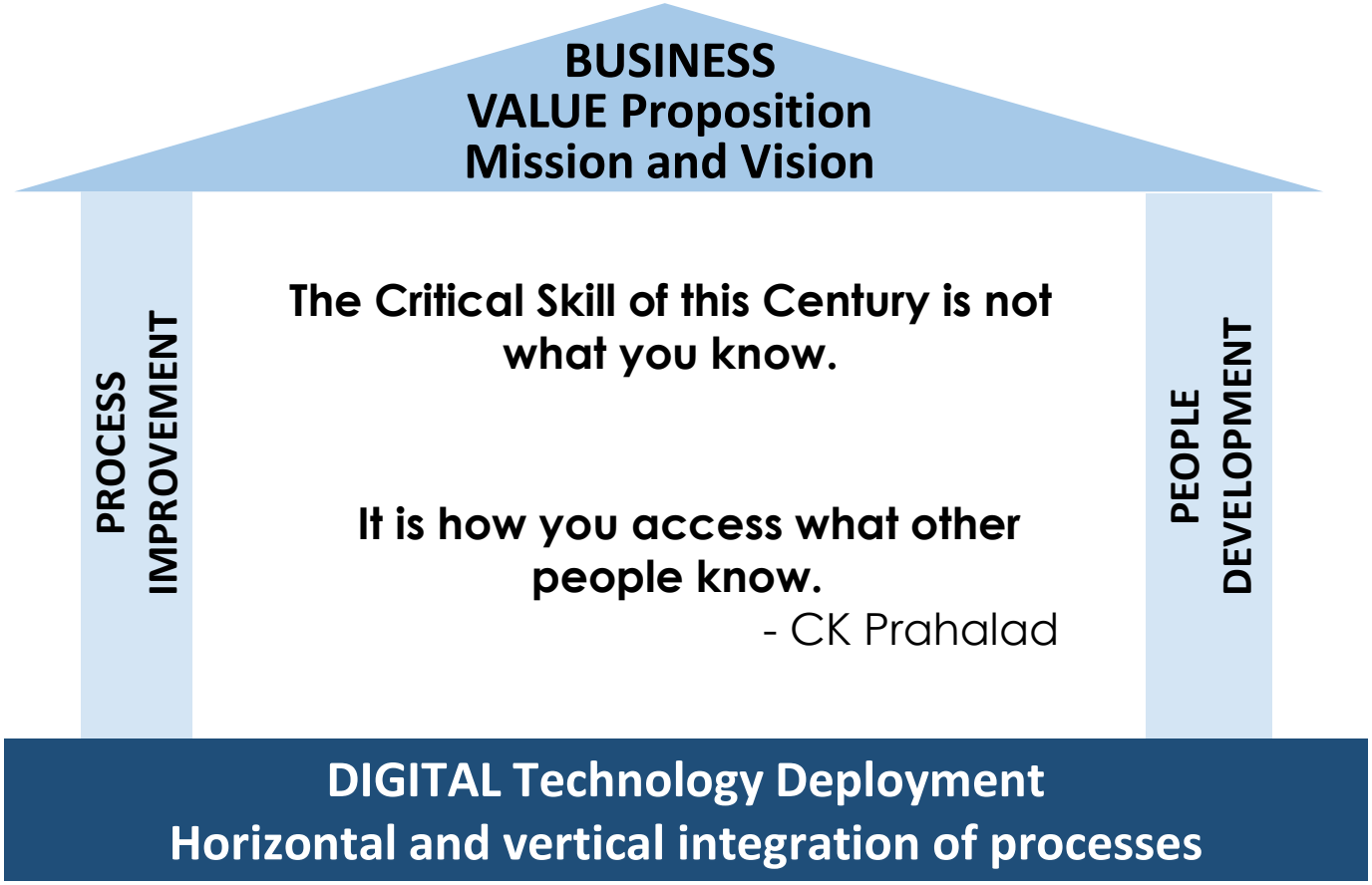
LEADERSHIP Philosophy



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LEADERSHIP Philosophy

When Leaders Transform, the Organization Transforms

If you want to have more, you have to become more.

For things to change, you have to change.

For things to get better, you have to get better.

For things to improve, you have to improve.

If you grow, everything grows with you.

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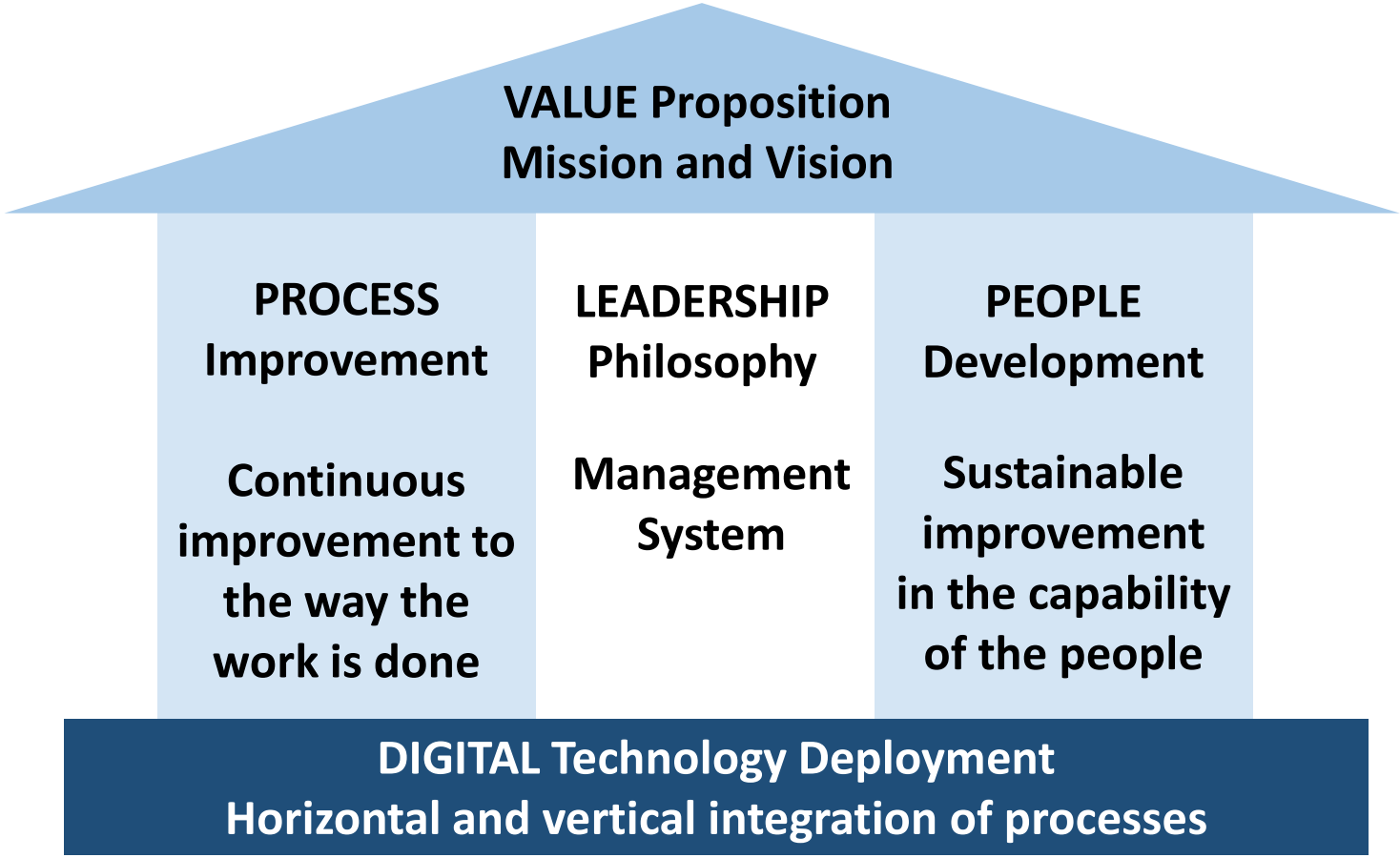
5 Pillars of Operational Excellence



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Operations Management Innovation (OMNI) Methodology

CREATING GROWTH, ENHANCING LIVES

Stage 1 — Determine

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- Generate initiatives
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- Prioritize initiatives

- Assign responsibilities and estimate budgets required
- Establish duration and deliverables

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OMNI Programme

SIMTech and SSG (previously known as WDA) jointly developed this programme to improve productivity of companies by transferring knowledge and developing productivity champions to sustain productivity improvements and achieve operational excellence. (consisting of 2 modules with 20 sessions)

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OMNI Programme

$12K
CU1 - $6K
CU2 - $6K

90% Funding

$1.2K per trainee (before GST)
CU1 - $600
CU2 - $600

70% Funding

$3.6K per trainee (before GST)
CU1 - $1.8K
CU2 - $1.8K

- **Singaporean or Permanent Resident** employees fully sponsored by **SMEs** can enjoy course fee funding support of **up to 90%** of the course fee under the **Enhanced Training Support for Small & Medium Enterprises (SMEs) scheme**, subject to eligibility criteria.

- **Singaporeans aged 40 years and above** can enjoy course fee funding of **up to 90%** of the course fee under the **SkillsFuture Mid-career Enhanced Subsidy (MCES)**.

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Operations Management Innovation (OMNI) Methodology

CREATING GROWTH, ENHANCING LIVES

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Determine	**Identify**	**Improve**	**Prioritize**	**Develop**
DETERMINE BUSINESS STRATEGY AND OBJECTIVES	IDENTIFY ACTIVITY LANDSCAPE	IDENTIFY IMPROVEMENT AREAS AND ASSESS PRODUCTIVITY	GENERATE AND PRIORITIZE INITIATIVES	DEVELOP ACTION PLAN
• Understand background information • Review current business competitive strategy and gaps • Determine business objectives	• Understand organization structure • Check alignment between business objectives and departments • Identify current activity map	• Identify improvement areas • Identify activities, input resources, and outputs of improvement areas • Assess current productivity of improvement areas	• Generate initiatives • Assess productivity indexes of improvement areas • Prioritize initiatives	• Assign responsibilities and estimate budgets required • Establish duration and deliverables

Over 300 Companies

Over 1000 Productivity Champions

20% to 50% Improvements

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Transformation starts NOW from me

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