การวัด, วิเคราะห์, และการจัดการความรู้

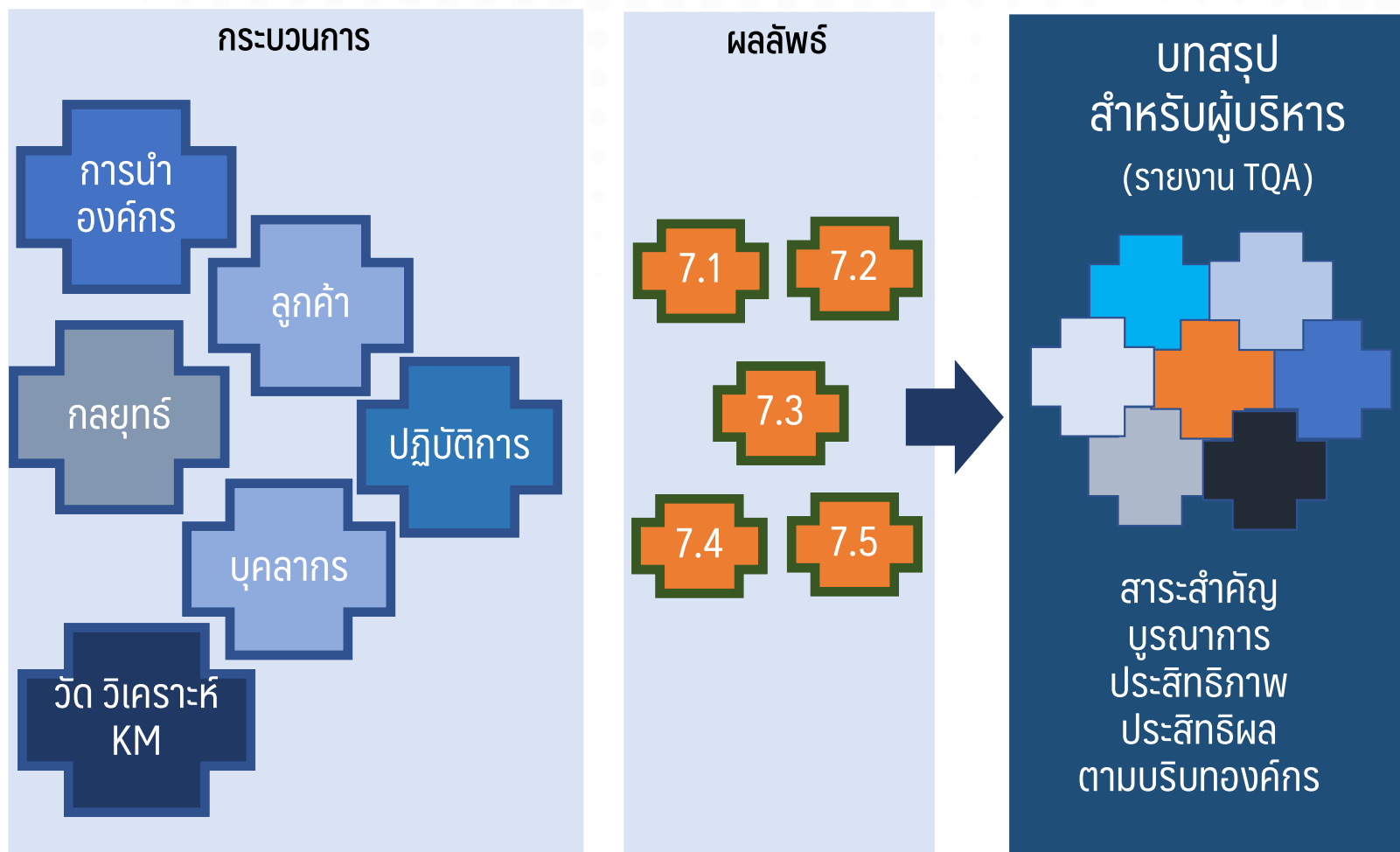โดย   ผศ.ดร. อธิศานต์ วายุภาพ

ผู้อำนวยการสถาบันเพิ่มผลผลิตแห่งชาติ
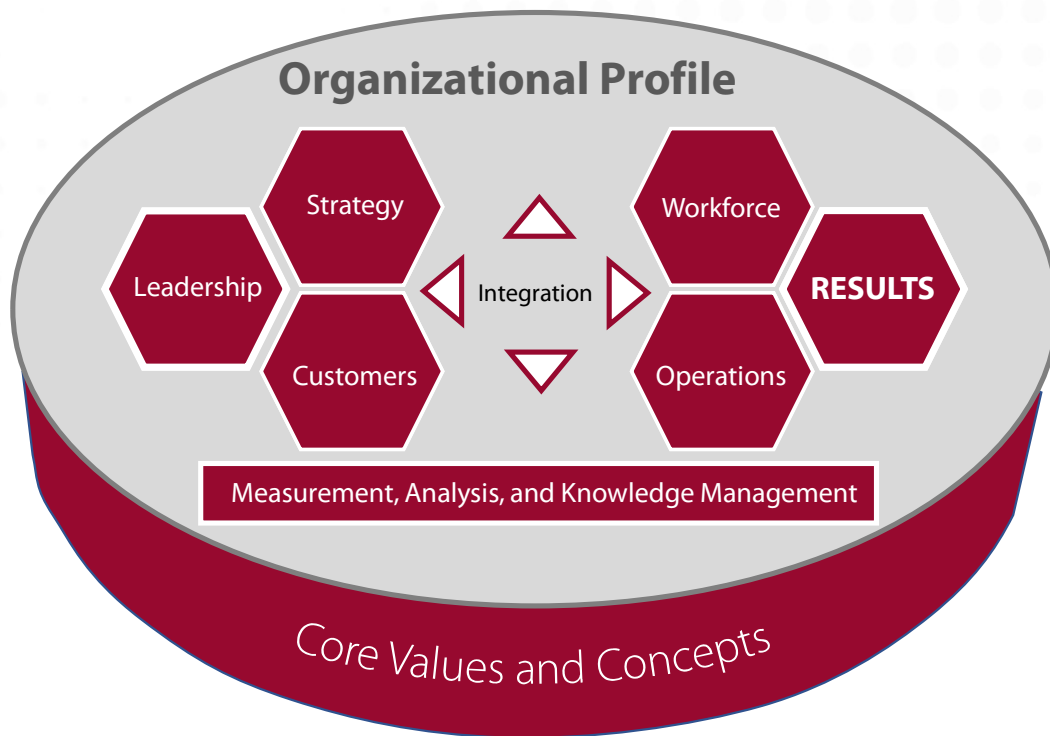
กรอบการดำเนินการเชิงระบบ
กระบวนการและผลลัพธ์มีความสัมพันธ์เกี่ยวเนื่องกัน

- คะแนนประเมินสะท้อนระดับศักยภาพของกระบวนการ (ADLI) และ ผลลัพธ์ (LeTCI)

องค์ประกอบในการประเมิน

- **MEASUREMENT,**
- **ANALYSIS, AND**
- **KNOWLEDGE MANAGEMENT**

4.1 การวัด วิเคราะห์ และปรับปรุง ผลการ ดำเนินการของสถาบัน (Measurement, Analysis, and Improvement of Organizational Performance)

ก. **การวัดผลการดำเนินการ**
(PERFORMANCE Measurement)

ข. **การวิเคราะห์และทบทวนผลการดำเนินการ**
(PERFORMANCE ANALYSIS and Review)

ค. **การปรับปรุงผลการดำเนินการ**
(PERFORMANCE Improvement)

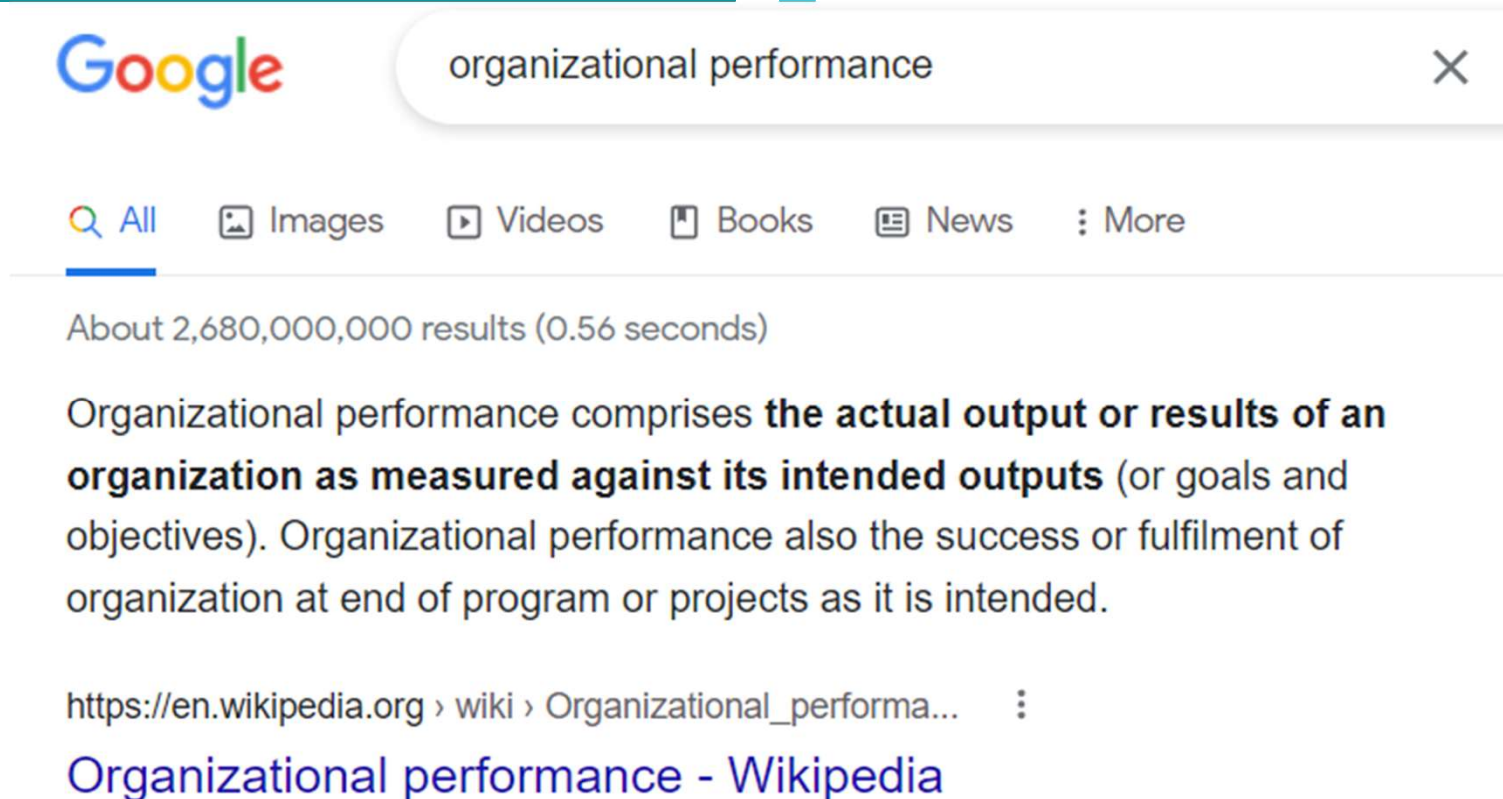**4.2** การจัดการสารสนเทศและการจัดการ ความรู้ (Information, and Knowledge Management)

ก. **ข้อมูลและสารสนเทศ** (Data and Information)

ข. **ความรู้ของสถาบัน** (Organizational Knowledge)

4.1 การวัด วิเคราะห์ และปรับปรุง ผลการดำเนินการของสถาบัน (Measurement, Analysis, and Improvement of ORGANIZATIONAL PERFORMANCE)

ORGANIZATIONAL PERFORMANCE

Google   organizational performance   ✕

Q All   🖾 Images   ▶ Videos   📖 Books   🗐 News   ⋮ More

About 2,680,000,000 results (0.56 seconds)

Organizational performance comprises **the actual output or results of an organization as measured against its intended outputs** (or goals and objectives). Organizational performance also the success or fulfilment of organization at end of program or projects as it is intended.

https://en.wikipedia.org › wiki › Organizational_performa...   ⋮

Organizational performance - Wikipedia

5

What is Organizational Performance?

Financial Performance	Market Performance	Shareholder Value
How is the company's financial health?	Has the company gained or lost market share?	Is the company making its shareholders richer
What was return on investment or assets, and value added?	Are the new products or upgrades in the pipeline?	This is the ultimate measure of a company's success
Have debts increased or gone down?	Did product upgrades boost sales?	Senior management's top priority

Is the company doing as well as it had planned to?
Is it doing as well as it said it would?

Organizational performance involves analyzing a company's performance against its objectives and goals. In other words, organizational performance comprises real results or outputs compared with **intended outputs**. The analysis focuses on three main outcomes, first, shareholder value performance; second, financial performance; and third, market performance.

Ref: https://marketbusinessnews.com/financial-glossary/organizational-performance-definition-meaning/
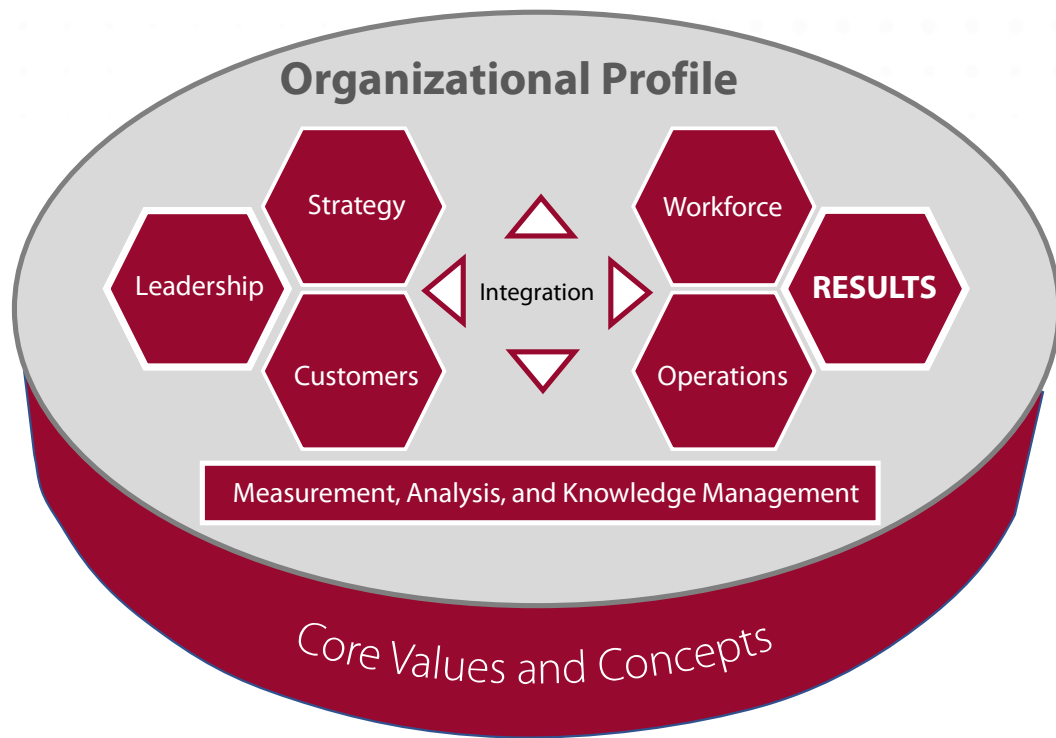
Baldrige Excellence Framework and Criteria for **Performance Excellence**
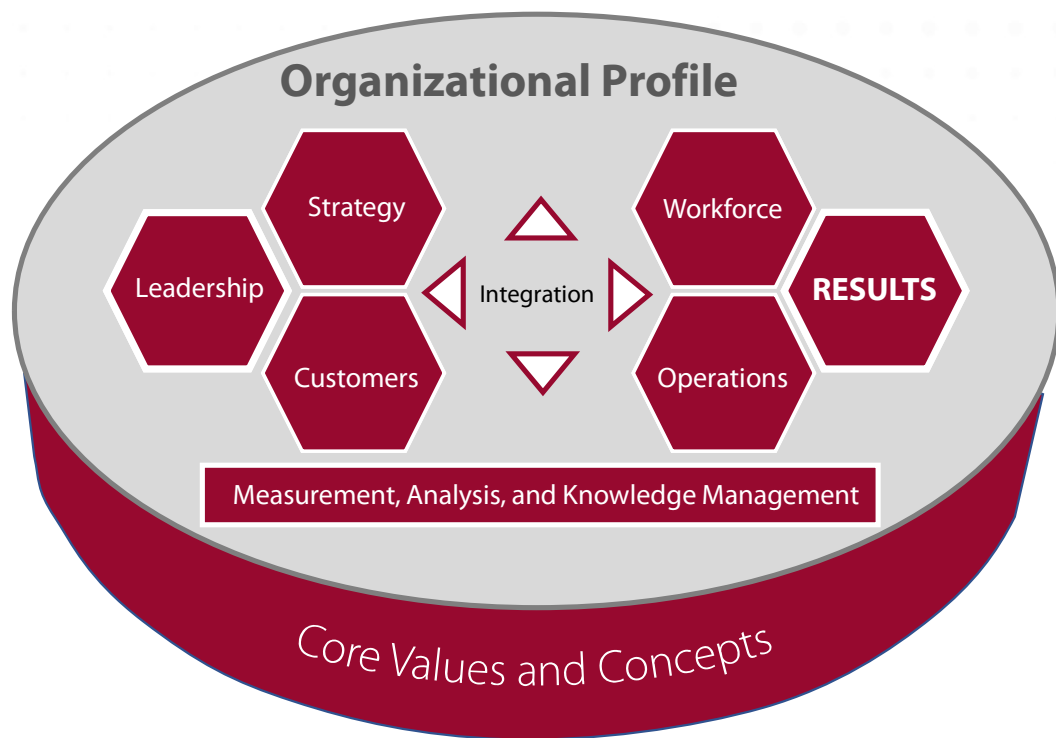
- Reach organizational goals,
- Improve results, and
- Become more competitive

- Higher productivity
- Greater customer loyalty
- Increased market share
- Improved profitability
- Better Employee Relations

Baldrige Excellence Framework and Criteria for Performance Excellence

7.1 ผลลัพธ์ด้านกระบวนการ
 • Student Learning and Process Results

7.2 ผลลัพธ์ด้านลูกค้า

7.3 ผลลัพธ์ด้านบุคลากร

7.4 ผลลัพธ์ด้านการนำองค์กร

7.5 ผลลัพธ์ด้านงบประมาณ การเงิน ตลาด และกลยุทธ์

 • Budgetary, Financial, Market, and Strategy Results

ระดับพัฒนาการขององค์กร (Score Band)
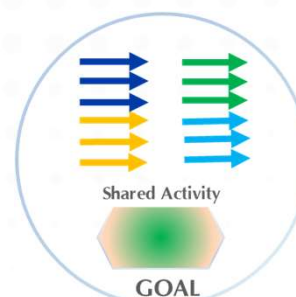
Management Capability
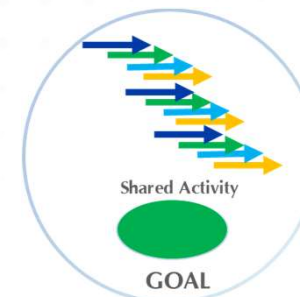

Reacting to Problems (0–25%)	Early Systematic Approaches (30–45%)	Aligned Approaches (50–65%)	Integrated Approaches (70–100%)

PROCESS

- Approach (A)
- Deploy (D)
- Learning (L)
- Integration (I)

RESULTS

- Level (L)
- Trend (T)
- Comparison (C)
- Integration (I)

การวัด วิเคราะห์

การวัด, วิเคราะห์

ควบคุม

หมวดที่ 4

- **MEASUREMENT,**
- **ANALYSIS, AND**
- **KNOWLEDGE MANAGEMENT**

4.1 การวัด วิเคราะห์ และปรับปรุง ผลการดำเนินการของสถาบัน (Measurement, Analysis, and Improvement of Organizational Performance)

ก. **การวัดผลการดำเนินการ** (PERFORMANCE Measurement)

ข. **การวิเคราะห์และทบทวนผลการดำเนินการ** (PERFORMANCE ANALYSIS and Review)

ค. **การปรับปรุงผลการดำเนินการ** (PERFORMANCE Improvement)

4.2 การจัดการสารสนเทศและการจัดการความรู้ (Information, and Knowledge Management)

ก. **ข้อมูลและสารสนเทศ** (Data and Information)

ข. **ความรู้ของสถาบัน** (Organizational Knowledge)

4.1 การวัดวิเคราะห์ และปรับปรุงผลการดำเนินการของสถาบัน (Measurement, Analysis, and Improvement of Organizational Performance) : สถาบันมีวิธีการอย่างไรในการวัดวิเคราะห์ เพื่อนำมาปรับปรุงผลการดำเนินการของสถาบัน

BASIC

ก. การวัดผลการดำเนินงาน (Performance Measurement)

    1. ตัววัดผลการดำเนินการ

    2. ข้อมูลเชิงเปรียบเทียบ

    3. ความคล่องตัวของการวัดผล (Link: Cat 2.2 ก5)

ข. การวิเคราะห์ และทบทวนผลการดำเนินการ (Performance Analysis and Review) (Link Cat.1)

    ทบทวนผลการดำเนินการและขีดความสามารถขององค์กร

ค. การปรับปรุงผลการดำเนินการ (Performance Improvement)

    1. ผลการดำเนินการในอนาคต (Link Cat. 2.2 ก6)

    2. การปรับปรุงอย่างต่อเนื่องและนวัตกรรม (Link Cat. ก6.1, 6.2)

Performance

PERFORMANCE. Outputs and their outcomes obtained from student learning, processes, programs, students, and other customers that permit you to evaluate and compare your organization's results to performance projections, standards, past results, goals, and other organizations' results. Performance can be expressed in nonfinancial and financial terms.

The Education Criteria address four types of performance: (1) program and service; (2) student- and other customer-focused; (3) operational; and (4) budgetary, financial, and market.

Program and service performance is performance relative to measures and indicators of program and service characteristics that are important to students and other customers. Examples include the effectiveness of curriculum and instruction, assessment of student learning, participation in professional development opportunities, and student placement following program completion.

PERFORMANCE : ผลการดำเนินการ

"ผลการดำเนินการ" หมายถึง ผลผลิตและผลลัพธ์ที่ได้จากการเรียนรู้ของผู้เรียน กระบวนการ หลักสูตร ผู้เรียน และลูกค้ากลุ่มอื่น ซึ่งสามารถประเมินผลและเปรียบเทียบกับ ผลการดำเนินการที่เกิดขึ้นกับผลการดำเนินการที่คาดการณ์ไว้ มาตรฐาน ผลลัพธ์ที่ผ่านมา เป้าประสงค์และกับผลลัพธ์ขององค์กรอื่น ๆ ผลการดำเนินการอาจแสดงทั้งในรูปของการเงิน และรูปแบบอื่น ๆ

เกณฑ์ EdPEx นี้ กล่าวถึงผลการดำเนินการ 4 ด้าน ได้แก่ (1) ด้านจัดการศึกษา วิจัย และบริการฯ (2) ด้านการมุ่งเน้นผู้เรียนและลูกค้ากลุ่มอื่น (3) ด้านการปฏิบัติการ และ (4) ด้านงบประมาณ การเงิน และตลาด

ผลการดำเนินการด้านการจัดการศึกษา วิจัย และบริการฯ (ข้อ 7.1) คือ ผลการดำเนินการ ซึ่งเกี่ยวข้องกับคุณลักษณะของตัววัดและตัวชี้วัดของการจัดการศึกษา วิจัย และบริการฯ ซึ่งมี ความสำคัญต่อผู้เรียนและลูกค้ากลุ่มอื่น ตัวอย่างเช่น ความมีประสิทธิผลของหลักสูตรและวิธีการสอน การประเมินผลการเรียนรู้ของผู้เรียน โอกาสเข้าร่วมในกิจกรรมการพัฒนาวิชาชีพของผู้เรียน และการได้งานทำเมื่อสำเร็จการศึกษา

Criteria Glossary

Performance

Student- and other customer-focused performance is performance relative to measures and indicators of students' and other customers' perceptions, reactions, and behaviors. Examples include admissions, retention, student and other customer complaints, and student and other customer survey results.

Operational performance is workforce, leadership, and organizational performance (including ethical and legal compliance) relative to measures and indicators of effectiveness, efficiency, and accountability. Examples include cycle time, productivity, accreditation, waste reduction, workforce turnover, workforce cross-training rates, regulatory compliance, fiscal accountability, strategy accomplishment, and

community involvement. Operational performance might be measured at the program, school, class, or individual level; key work process level; and organizational level.

ผลการดำเนินการด้านการจัดการศึกษา วิจัย และบริการฯ (ข้อ 7.1) คือ ผลการดำเนินการ ซึ่งเกี่ยวข้องกับคุณลักษณะของตัววัดและตัวชี้วัดของการจัดการศึกษา วิจัย และบริการฯ ซึ่งมีความสำคัญต่อผู้เรียนและลูกค้ากลุ่มอื่น ตัวอย่างเช่น ความมีประสิทธิผลของหลักสูตรและวิธีการสอน การประเมินผลการเรียนรู้ของผู้เรียน โอกาสเข้าร่วมในกิจกรรมการพัฒนาวิชาชีพของผู้เรียน และการได้งานทำเมื่อสำเร็จการศึกษา

ผลการดำเนินการด้านการมุ่งเน้นผู้เรียนและลูกค้ากลุ่มอื่น (ข้อ 7.2) คือ ผลการดำเนินการ ซึ่งเกี่ยวข้องสัมพันธ์กับคุณลักษณะของตัววัดและตัวชี้วัดด้านการรับรู้ การตอบสนอง และพฤติกรรมของผู้เรียนและลูกค้ากลุ่มอื่น ตัวอย่างเช่น การรับผู้เรียนเข้าศึกษาในสถานศึกษา การคงอยู่ของผู้เรียน ข้อร้องเรียนของผู้เรียนและลูกค้ากลุ่มอื่น และผลการสำรวจผู้เรียนและลูกค้ากลุ่มอื่น

ผลการดำเนินการด้านการปฏิบัติการ (ข้อ 7.3 - 7.5) คือ ผลการดำเนินการด้านบุคลากร ด้านการนำองค์กร และผลการดำเนินการของทั้งสถาบัน (รวมถึงจริยธรรมและการปฏิบัติตามกฎหมาย) ซึ่งเกี่ยวข้องกับตัววัดหรือตัวชี้วัด ด้านประสิทธิผล ประสิทธิภาพ และความรับผิดชอบ ตัวอย่างเช่น รอบเวลา การเพิ่มผลผลิต (ผลิตภาพ) การรับรองมาตรฐาน การลดของเสีย อัตราการลาออกของบุคลากร อัตราการฝึกอบรมข้ามสายงานของบุคลากร การปฏิบัติตามกฎระเบียบ ความรับผิดชอบด้านการเงิน การบรรลุแผนกลยุทธ์ ตลอดจนการมีส่วนร่วมในชุมชน ผลการดำเนินการด้านการปฏิบัติการอาจวัดที่ระดับสถาบัน ระดับกระบวนการหลัก และระดับหลักสูตร สาขาวิชา ชั้นเรียน หรือตัวบุคคล

Criteria Glossary

Performance

Budgetary, financial, and market performance is performance relative to measures of cost containment, revenue, and market position, including budget utilization, asset growth, and market share. Examples include instructional and general administration expenditures per student as a percentage of budget; program expenditures as a percentage of budget; performance to budget; annual budget increases or decreases; income, expenses, reserves, endowments, and annual grants/awards; resources redirected to education from other areas; scholarship growth; the percentage of budget for research; the budget for public service; and market gains.

ผลการดำเนินการด้านงบประมาณ การเงิน และตลาด (ข้อ 7.5) คือ ผลการดำเนินการ ซึ่งเกี่ยวข้องกับคุณลักษณะของตัววัดในเรื่องต้นทุน รายได้ และตำแหน่งในตลาด รวมถึงการใช้ งบประมาณ การเติบโตของสินทรัพย์และส่วนแบ่งตลาด ตัวอย่างเช่น ร้อยละของค่าใช้จ่ายต่อ หัวผู้เรียนในด้านการบริหารและด้านการสอนต่องบประมาณ ร้อยละของค่าใช้จ่ายหลักสูตรต่อ งบประมาณ ผลการดำเนินการต่องบประมาณที่ได้รับ การเพิ่มขึ้นหรือลดลงของงบประมาณประจำปี รายได้ ค่าใช้จ่ายต่าง ๆ เงินทุนสำรอง และกองทุนเงินรางวัลและเงินสมทบประจำปี การผัน ทรัพยากรมาจากแหล่งอื่นเพื่อใช้ในการศึกษา ทุนการศึกษาที่เพิ่มขึ้น ร้อยละของงบประมาณ สำหรับการวิจัย ตลอดจนงบประมาณสำหรับการบริการสังคม รวมทั้งการเพิ่มส่วนแบ่งตลาด

4.1 Process Relationship Diagram
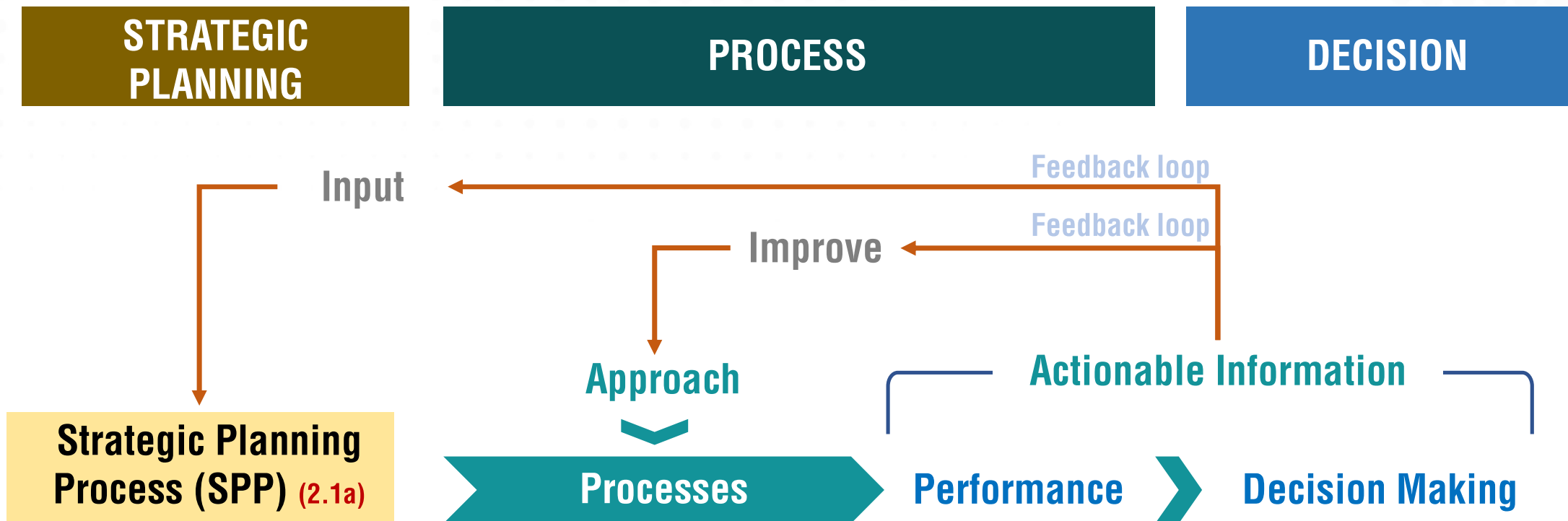
OUR STUDENTS, OUR PRIDE

ITE IN NUMBERS (FOR FY2020)

Full-time Student Enrolment
27,825

Student Success Rate
88%

Students' Satisfaction with ITE
97.2%

Employers' Satisfaction with ITE Graduates
(Triennial - FY2019)
96.5%

CLASS OF 2020

A total of **13,945 students** graduated from ITE's full-time, part-time and traineeship courses for Academic Year 2019/2020. Among them, **679** received Certificates of Merit, with **221** receiving Course Medals for topping their respective courses.

Top honours were awarded to 11 ITE graduates. They were:

Lee Kuan Yew Gold Medal
Samuel Choo Wai Meng
Tang Yu Alexander
Muhammad Zaliq B Husri

Tay Eng Soon Gold Medal
Nicole Baruela Ayathuray
'Aqilah Insyirah Bte Abdul R
Pau Yee Song

The Ngee Ann Kongsi Gold Medal
Alex Oh Jia Shun
Siti Nurshamira Bte Sabri
Mok Ting Yuan

e2i Gold Medal
Teo Wei Li Willie

IES Engineering Award
Nabillah Bee Bte Basheer Ahmad

Despite the restrictions posed by Covid-19, the resilience of our students shone through as they continued to do us proud, be it through physical or virtual platforms.

A team of two ITE students emerged as one of the top three winners in the **Global Final of the Social Innovation Relay 2020 on 16 Jun 2020**. With their business concept of a social enterprise that could train and place youths with autism into jobs, the duo prevailed against local and foreign teams to land a commendable podium finish.

Beating 42 other teams from local schools, including the Polytechnics and Junior Colleges, a group of three ITE students took top spot at the **Singapore University of Social Sciences (SUSS) SBIZ Business Plan Competition** on 18 Jul 2020. The competition required participating teams to address pertinent social issues with innovative digital solutions. The ITE trio impressed the judges with their innovative concept of using immersive technologies to help the elderly stay active and healthy.

The 14th edition of the national skills competition, **WorldSkills Singapore 2020**, held from 28 Sep to 9 Oct 2020, saw ITE students Lim Hui Fang and Ho Jia Yi clinch Gold in the Beauty Therapy and Cooking skills areas, respectively. Team ITE also bagged seven Silver medals, five Bronze medals, and 10 Medallions for Excellence in other skills areas.

At the inaugural virtual cybersecurity **Capture-the-Flag 2020 competition** on 30 Sep 2020 supported by the National Cybersecurity R&D Laboratory, a team of three *Higher Nitec* students beat eight other teams from ITE, Australia's Box Hill Institute and Canada's Southern Alberta Institute of Technology to secure the top position.
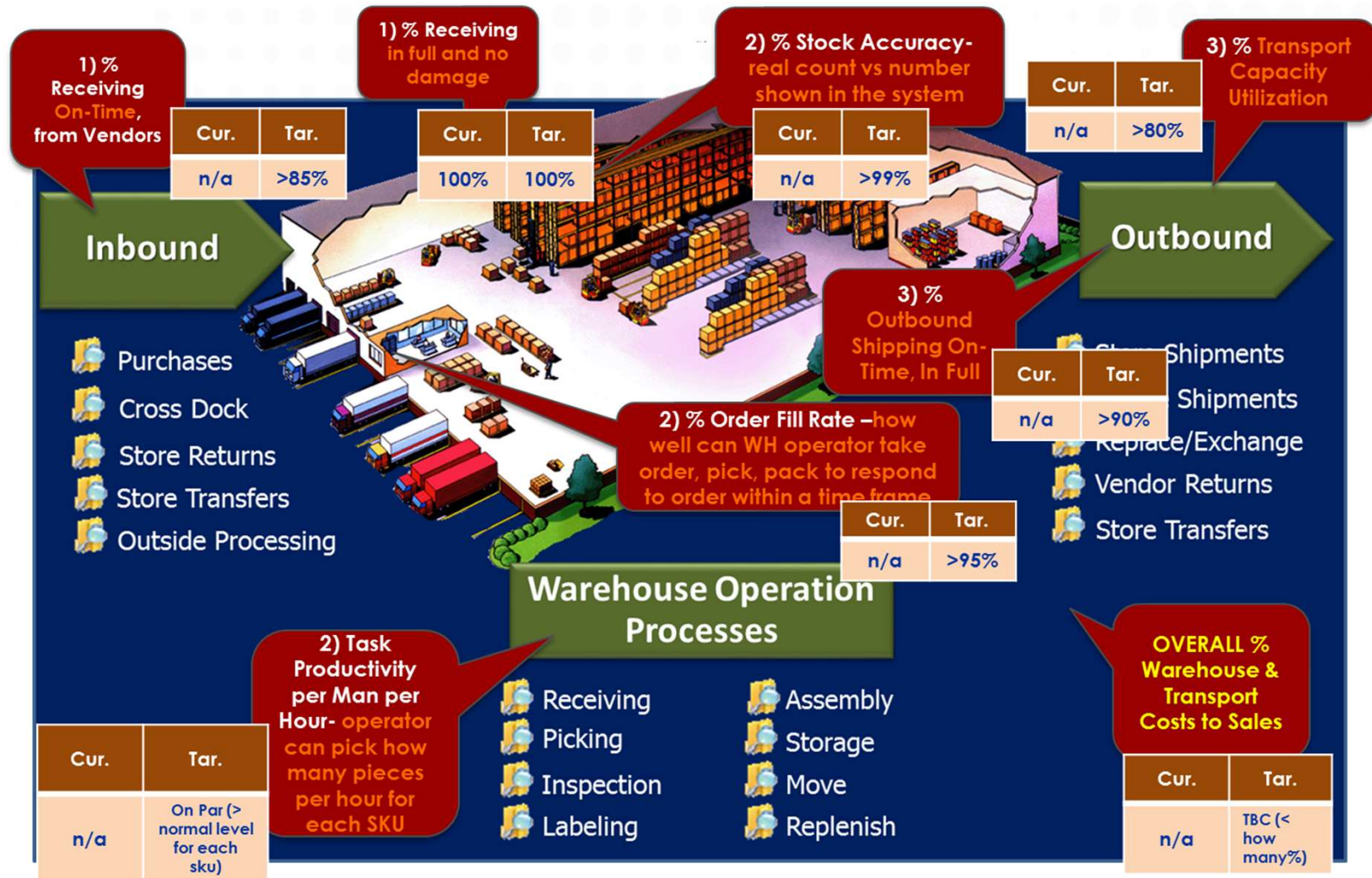
Javier Ng Jing Xuan, a *Nitec* in Finance Services student, trumped more than 120 fellow nominees to be named one of the three winners of the **National Young Leader Award (NYLA) 2020** on 5 Jan 2021. The award recognised young leaders, aged between 15 and 19 years, who were involved and engaged, and showed conviction in community engagement, self-leadership and group leadership. As an NYLA winner, Javier would have access to resources to help him catalyse and incubate his three-month internship project, with the aim to positively influence the community. Another ITE student, Mok Ting Yuan from the *Nitec* in Infocomm Technology course, was among the top 25 NYLA awardees.

Higher Nitec in Cyber & Network Security students, Tong Yew Ching Kelvin and Tay Gao Jun, proved their mettle by being the first two ITE students to achieve the **Offensive Security Certified Professional (OSCP) Certification**. The Certification is well-known, respected, and required for many top cybersecurity positions, and is obtained through a 24-hour proctored practical exam.

CORPORATE OUTCOMES

1. Proposed – Warehouse Operation

3.10 Recommend to Setup Logistics KPIs and System for Tracking and Reporting Performance

1) % Receiving On-Time, from Vendors

Cur.	Tar.
n/a	>85%

1) % Receiving in full and no damage

Cur.	Tar.
100%	100%

2) % Stock Accuracy- real count vs number shown in the system

Cur.	Tar.
n/a	>99%

3) % Transport Capacity Utilization

Cur.	Tar.
n/a	>80%

Inbound

- Purchases
- Cross Dock
- Store Returns
- Store Transfers
- Outside Processing

Outbound

- Store Shipments
- Shipments
- Replace/Exchange
- Vendor Returns
- Store Transfers

3) % Outbound Shipping On-Time, In Full

Cur.	Tar.
n/a	>90%

2) % Order Fill Rate –how well can WH operator take order, pick, pack to respond to order within a time frame

Cur.	Tar.
n/a	>95%

Warehouse Operation Processes

- Receiving
- Picking
- Inspection
- Labeling
- Assembly
- Storage
- Move
- Replenish

2) Task Productivity per Man per Hour- operator can pick how many pieces per hour for each SKU

Cur.	Tar.
n/a	On Par (> normal level for each sku)

OVERALL % Warehouse & Transport Costs to Sales

Cur.	Tar.
n/a	TBC (< how many%)

1. Proposed – Warehouse Operation

1.10 Recommend to Setup Logistics KPIs and System for Tracking and Reporting Performance (con't)

Measurement	Calculation	Definition
1. % Receiving On-Time from Vendor	$$\frac{\text{\# of Orders received On–time by Line Item}}{\text{Total number of orders received by Line Item}}$$	The percent of order received from a supplier per on-time requirements.
2. % Receiving In-Full and No damage	$$\frac{\text{\# of Order Received In–full and damage free by Line Item}}{\text{Total number of orders received by Line Item}}$$	The percent of order received from supplier in-full (order quantity must be fulfilled in full).
3. % Stock Accuracy	$$\frac{\text{Number of Actual QTY by SKUs}}{\text{Number of System Reported QTY by SKUs}}$$	Measures the accuracy of the physical inventory compared to the reported inventory.
4. Task Productivity per man per hour	For a given time period: $$\frac{\text{Total orders picked}}{\text{Total hours worked in the picking operation}}$$	Measures the productivity of picking operations in orders per person hours.
5. % Order Fill Rate	For a given time period: $$\frac{\text{Total orders shipped complete}}{\text{Total orders shipped}}$$	Measure of orders shipped complete - with no units back ordered.
6. % Transportation Capacity Utilization	$$\frac{\text{Total Cube loaded on the truck}}{\text{Total capacity Cube of truck}}$$	Measure of utilized-cube loaded on the truck
7. % Outbound Shipping On-Time and In-full	$$\frac{\text{\# of Line Item in orders shipped On–time and In–full}}{\text{Total \# of Line Item in all orders shipped}}$$	Measure of All Line items in all order that are shipped On-Time and In-Full.
8. % Warehouse & Transportation Cost to Sales	$$\frac{\text{Total warehouse and transportation costs}}{\text{Total sales}}$$	The cost to run warehouse and transportation relative to total sales.

ก. การวัดผลการดำเนินงาน (Performance Measurement)

1. ตัววัดผลการดำเนินการ **OVERALL: How** do you track data and information on daily operations and overall organizational Performance?

STRATEGIC PLANNING	PROCESS

Input

Improve

Approach

Actionable Information

4 **Strategic Planning Process (SPP)** (2.1a)

3 **Processes**

2 **Performance**

1 **Decision Making**

Multiple:
- key organizational performance measures
- key short & longer-term financial
- tracking frequency

2. KEY Result ที่สำคัญ ต่อ **Daily Operations**

Multiple: track progress on achieving

KEY Data & Information (รวบรวม ข้อมูลจากแหล่งต่าง ๆ ที่ใช้ในการตัดสินใจ

1. KEY Result ที่สำคัญ ต่อ **Performance Excellence**

Multiple: select, collect, align, and integrate

Notes

4.1. The questions in this item are closely linked to each other and to other Education Criteria items. The following are examples of key linkages:

- Your organizational performance measurement (4.1a)—including the comparative data and information you select, and the performance measures

  reported throughout your Criteria item responses—should inform your organizational performance reviews (4.1b).

- Organizational performance reviews (4.1b) should reflect your strategic objectives and action plans (category 2), and the results of organizational performance analysis and review should inform your strategy development and implementation, and your priorities for improvement and opportunities for innovation (4.1c).

- Your performance projections for your key action plans should be reported in 2.2a(6).

- Your organizational performance results should be reported in items 7.1–7.5.

4.1a. Data and information from performance measurement should be used to support fact-based decisions that set and align organizational directions and resource use at the work unit, key process, department, and organization levels.

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2 Performance 〉 1 Decision Making

KEY Data & Information (รวบรวม ข้อมูลจากแหล่งต่าง ๆ ที่ใช้ใ ตัดสินใจ

1. KEY Result ที่สำคัญ ต่อ **Performance Excellence**

Multiple: select, collect, **ALIGN, AND INTEGRATE**

Commentary

Aligning and integrating your performance management system. Alignment and integration are key concepts for successfully implementing and using your performance measurement system. The Education Criteria view alignment and integration in terms of how widely and how effectively you use that system to meet your needs for organizational performance assessment and improvement and to develop and execute your strategy.

Alignment and integration include how measures are aligned throughout your organization and how they are integrated to yield organization-wide data and information. Organization-wide data and information are key inputs to organizational performance reviews and strategic decision making. Alignment and integration also include how your senior leaders deploy performance measurement requirements to track work group and process-level performance on key measures that are targeted for their organization-wide significance or for improvement.

Big data. The challenge, and the potential, of ever-increasing amounts of and modalities for data lies in choosing, synthesizing, analyzing, and interpreting both quantitative and qualitative data, turning them into useful information, and then acting operationally and strategically. This requires not just data, but knowledge, insight, and a mindset for intelligent risk taking and innovation.

ALIGNMENT

Alignment & Integration starts with Strategic Development (Cat. 2)

How do we align them?

ALIGNMENT

SUCCESS

Vision Goal Brainstorm Analyze Strategy Planning Implementation Teamwork Consistency

National Performance Excellence (NPE): Operations by Design (Education)

4

Business Excellence

Foundation Perspective

Leadership
- Change Management
- Management by Objectives (OKR)
- Management Systems & KPIs

Business Strategy
- Vision, Mission & Values Success Model
- Focus Based Strategy

Customers
- Customer Driven Org.
- User Experience Based Products/Services

KM & IT
- Digitalization Org.
- KM & Innovation
- Learning Org.
- Data Governance

Workforce
- Culture of Excellence
- Workforce Engagement
- Productive Workplace

Org. Structure
- Governance Systems
- Agile Systems and Structure

Results
- **Finance, Research, and Academic Performance Growth**
- **Exceptional Student Value**
- **Stakeholder Satisfactions**

Operations Excellence

Drive Performance

Enablers Perspective

Operations Leadership
- Operations Performance Management
- Sustainable Development

Operations Strategy-1
- World Class Research
- Best-in-Class Teaching
- Co-operations & Alliances
- R2R

Operations Strategy-2
- Hybrid Classroom
- Lifelong Learning Course
- Digital Office

Operations KM&IT
- Data Governance
- PDPA & Cybersecurity

Operations Workforce
- High Performance
- Hybrid Workplace
- Flexible Workplan/Joint Appointment Program

Operations Org
- Process Thinking
- Capability Based Org.
- Agile or Cross Functional Team

Objectives
- **Adequate & Optimal Setting of Enablers**

• สิ่งที่ทำให้เกิดการเปลี่ยนแปลง (Enablers)

Operational Excellence

Process Perspective

Suppliers & Partners

Resources
- **Material & Information**
- **Staff & Know-how**
- **Assets & Energy**

Operational Process (Capability & Capacity)

Teaching	Research	Academic Services
IQA	Training	Student Services
Staff Serv.	Learning Support Service	

Customers

Results
- **Financial Performance**
- **Cost-effective Products & Services**
- **Customer-driven Quality**
- **Delivery Accuracy**
- **Capacity & Resource Utilization**

Support Perspective

Technology
- e-Learning
- e-Academic System.
- e-QMS
- e-Library

Innovation
- Hybrid-Classroom
- Virtual Laboratory

Results
- **Support of Business & Operations**

Asst. Prof. Athisarn Wayuparb, Ph.D., CISA

2025 ROADMAP

Strong Contender in Thailand

xxxx

xxxxx

xxxxx

xxxxx

xxxxx

xxxx

xxxx

2019   2020   2021   2022   2023   2024   2025

Strong

Horizon I

Capacity-Building

Big

Horizon II

Growth

Long

Horizon III
Sustaining Excellence

STRATEGY 2019 – 2025

END

Key Corporate Objective Areas

WAYs
Corporate Strategies

Big
Long Strong

Top Quartile xxx Service Performance by 2025

1 Performance: Best-in-class operations — Strong

2 Growth: Business Expansion and Sustainability — Big

3 Synergy: Deeper and broader Group collaboration — Long

4 Stakeholder excellence: Multi-stakeholder balance — Long

1.1 **Logistics Service Excellence**
1.2
1.3
1.4

2.1 **Accelerate xxx Services for xxxx Products**
2.2

2.3

2.4 **Total Customer Engagement & Satisfaction**

3

4.1 **Ensure for Regulatory Compliance, Customer and Community Trust**
4.2
4.3 **Enhance Employee Competency and Engagement to Support Business Growth**

STRATEGY 2019 – 2025

Big
Long **Strong**

END

Top Quartile xxx Service Performance by 2025

Key Corporate Objective Areas

1	**Performance: Best-in-class operations**	Strong
2	**Growth: Business Expansion and Sustainability**	Big
		Long
4	**Stakeholder excellence: Multi-stakeholder balance**	Long

WAYs
Corporate Strategies

1.1 **Logistics Service Excellence**
1.2
1.3
1.4

2.1 **Accelerate xxx Services for xxxx Products**
2.2
2.3
2.4 **Total Customer Engagement & Satisfaction**

4.1
4.2
4.3

12 Corporate KPIs

- **Logistics Service Excellence Score**

Alignment & Integration จากVision, Mission สู่ แผนกลยุทธ์ และตัววัด

ตารางที่ 3 แสดงตัวผลการดำเนินงานด้าน Performance: Best-in-Class

Corporate Strategy	CSF	Corporate Strategic Objectives	Corporate Strategic KPIs
P1: Logistics Service Excellence	P1.1: Perfect Order Completion	1. เป็นผู้ให้บริการโลจิสติกส์ที่สามารถตอบสนองต่อคำสั่งซื้อได้ครบถ้วนและตรงตามเวลาที่กำหนดได้มากกว่า 98%	DIFOT (%)
	P1.2: High Process Reliability	2. กระบวนการ....มีค่าประสิทธิภาพโดยรวมของเครื่องจักรไม่น้อยกว่า 85% ภายในปี 2023	Overall Equipment Effectiveness (%OEE)
	P1.3: Low Operating Cost	3. ต้นทุนรถขนส่ง xx บาท/ตัน-กิโลเมตร ภายในปี 2024	Cost per ton-km. (฿)

Corporate Objectives	Corporate KPI	Corporate Strategic KPI		Main Functional KPI
Performance:	Logistics Service Excellence Score (Index)	DIFOT (%)	70%	OPD, TM, DF
		Overall Equipment Effectiveness (%OEE)	15%	OPD
		Cost per ton-km. (฿)	15%	TM

Unit	Functional Objective	Functional KPI	Weight	Escalate to Corporate Strategic KPI	Weight
OPD	ดำเนินงานด้านปฏิบัติการในระบบโลจิสติกส์ ให้บรรลุตามแผนงานของหน่วยงานอย่างมีประสิทธิภาพและประสิท	SLA Committed (%)	10		
	ตอบสนองต่อคำสั่งซื้อได้ครบถ้วนและตรงตามเวลาที่กำหนดได้มากกว่า 98%	DIFOT (%)	40	DIFOT (%)	40
	กระบวนการ...มีค่าประสิทธิภาพโดยรวมของเครื่องจักรไม่น้อยกว่า 85%	Overall Equipment Effectiveness (%OEE)	20	Overall Equipment Effectiveness (%OEE)	100
	ไม่มีผู้ได้รับบาดเจ็บถึงขั้นหยุดงาน	Injury Frequency Rate (Index)	6	Injury Frequency Rate (Index)	50
	ไม่มีการละเมิดนโยบายความปลอดภัย	Safety Policy Violation (Index)	4	Safety Policy Violation (Index)	50
	นำเทคโนโลยีที่ทันสมัยมาใช้เพื่อเพิ่มประสิทธิภาพในการทำงาน	Violate Legal & Regulatory (#)	2	Violate Legal & Regulatory (#)	#
	สามารถรองรับการขยายงานตามแผนธุรกิจขององค์กร	Employee Competency Score (%)	8		
	ไม่มีการละเมิดต่อกฎหมายและกฎระเบียบ	SUCCESS' Behavior Score (%)	10		
	ระดับสมรรถนะของพนักงานในหน่วยงานเป็นไปตามเป้าหมายองค์กร				
	ระดับความสอดคล้องของพฤติกรรมพนักงานต่อวัฒนธรรมองค์กรในหน่วยงานเป็นไปตามเป้าหมายองค์กร				

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TO DRIVE & CASCADING PERFORMANCE

Strategic Business Objectives

| Cost Efficiency | Improve Competitiveness | Improve Org. Excellence | Lower Risk | Strengthening Growth |

Critical Success Factors

Strategic KPI

Tactical KPI

Operational KPI

Excellence = Excellence in Practices

Legend:
- Strategy-focused process
- Partner-focused process
- Customer-focused process
- Internal-focused process
- Product & Service-focused process
- Production-focused process
- Organization-focused process
- Human Resource-focused process
- Technology-focused process
- Governance-focused process
- Supplier-focused process
- Sustainability-focused process
- Finance-focused process
- Distribution-focused process

Strategic Business Objectives

Improve Competitiveness

Critical Success Factors

| Faster Time-to-Market | Improve Brand Awareness | Improve Customer Interaction | Improve Customer Satisfaction & Loyalty | Improve Partner & Relationship Collaboration | Improve Responsive... |

STRATEGIC Key Performance Indicators

Faster Time-to-Market

| CMO | FO | S | OP | CRM | 2 |
| Procurement planning |
| Optimal collaboration across the value chain |

| CRDO | RE | S | OP | CRM | 2 |
| Operations strategy |
| Reduce research and development time through collaboration |

| CRDO | FO/RE | S | BD | CRM | 20 |
| IP portfolio assessments |
| License or acquire product/services and intellectual property |

| CRDO | FO | S | BD | CRM | 16 |
| Product/service portfolio planning |
| Improve utilization of product/service development channels |

| CRDO | FO | S | BD | CRM | 4 |
| Product/service design planning |
| Increase number and quality of product/service and service launches |

Improve Brand Awareness

| CMO | FO | S | MS | CRM | 1 |
| Brand strategy |
| Improve marketing strategy |

| CMO | FO | S | MS | CRM | 15 |
| Customer service planning |
| Develop and cultivate goodwill |

| CMO | FO | S | MS | | |
| Marketing and advertis... |
| Improve brand strength and g... |

| CMO | RE | | | | |
| Segmentation... |
| Improve effectiveness o... advertising processes |

| | | | | CRM | 15 |
| Sponsorsh... ing |
| Apply brand to new ... product/services |

Improve Customer Interaction

| CMO | FO | S | MS | ERP | 18 |
| Sales planning |
| Consolidate/realign sales territories |

| CMO | RO | S | MS | CRM | 16 |
| Sales assessment and workbench |
| Improve cross-sell and up-sell approaches |

| CMO | RO | S | BD | CRM | 26 |
| Product/service change specification |
| Improve definition of product/service and service specifications |

| COO | RE | S | MS | ERP | 16 |
| Customer account services |
| Improve customer service and support processes |

Improve Customer Satisfaction & Loyalty

| CMO | FO | S | MS | CRM | 4 |
| Brand development planning |
| Improve customer loyalty |

| CMO | RE/RO | S | MS | CRM | 1 |
| Customer service planning |
| Improve customer service |

| CMO | RE | S | MS | CRM | 22 |
| Market research oversight |
| Improve understanding of current customer satisfaction |

| CMO | RE | S | BD | CRM | 22 |
| Perform customer and market intelligence |
| Improve understanding of customer needs |

| CMO/COO | RE/RO | S | OP | | |

Improve Responsive...

| COO | FO | S | GA | | |
| Business development repo... |
| Balance between core and non-co... competencies |

| COO | RE/FL | S | OP | | |
| Operations strategy |
| ...of flexible products/s... |

| | | | S | GA | |
| ...chitecture |
| Improve ability ... into competiti... |

| COO | | | | | |
| Channe... |
| Improve ability ... into competiti... |

| COO | | | | | |
| Define ta... |
| Improve relatio... for key stakeho... |

| CFO | | | | | |
| Increase fo... acquisitio... |

TACTICAL Key Performance Indicators

Faster Time-to-Market

| CMO/CIO | RE | T | MS | CRM | 1 |
| Market research oversight |
| Improve market intelligence |

| CRDO | FO/RE | T | BD | CRM | 16 |
| Product/service design verification |
| Improve design and development processes |

| CRDO | FO/RE | T | BD | CRM | 16 |
| Product/service design standards |
| Improve product/service development performance management, methods and tools |

| CRDO | FO | T | OP | CRM | 20 |
| Procurement guidelines |
| Improve ordering and receipt processes |

Improve Brand Awareness

| CMO | FO | | | CRM | 1 |
| Brand develop... |
| Develop and leverage st... |

| CMO | FO | T | | | |
| Marketing and advert... |
| Improve brand awareness/elevat... image |

| CMO | FO | T | MS | CRM | |
| Brand strategy |
| Improve revenue generation capabilities of brand |

| CMO | FO | T | MS | CRM | 16 |
| Select channels for target assessments |
| Optimize marketing channels |

Improve Customer Interaction

| COO | | | | | |
| Demand ... |
| Improve capacity/dem... processes, skills and tools |

| | | | RE | S | DI | ERP | 16 |

Improve Customer Satisfaction & Loyalty

| CIO | RO | T | IT | | |
| Knowledge capture and avai... |
| Increase accuracy real-time inform... of demand thoughout the value ch... |

Improve ordering and receipt processes

Optimize marketing channels

Improve capacity/demand planning processes, skills and tools

Establish development of strategic assets as a key competency

Improve identification of stakeholder groups and establishment of priorities

CRDO	RE	T	GA	CRM	16
Project management					
Improve project management					

CMO	FO	T	BD	CRM	16
Product/service deployment planning					
Improve marketing and advertising performance management methods and tools					

COO	RE	T	DI	NET	16
Operate outbound transportation					
Improve pick, pack and ship processes					

CMO/COO	RE/RO	T	DI	ERP	16
Order processing					
Improve services and delivery					

CIO	RE	T	IT	NET	16
Infrastructure operations					
Improve integration of IT systems across partner networks					

CFO

Increase of dema

Increase infrastru

CRDO	RE	O	BD	CRM	16
Product deployment planning					
% of new product/service developments launched on budget					

CMO FO O MS

Brand tracki
% of tran...

CMO	FL/RE	O	MS	CRM	16
Customer servicing and contact history					
% of callers given satisfaction surveys					

CSO RO O GA ERP 11
Policy management
Company policies and procedures

CM

# of new

CMO	RE	O	BD	SCM	16
Monitoring and tracking					
% of new product/service dev... launched on time					

...and contact history
...work time spent speaking to

CMO	FL/RE	O	MS	ERP	24
Contact routing					
% of calls transferred					

CMO	FL/RE	O	MS	CRM	23
Customer servicing and contact history					
% of calls answered within set timeframe					

COO	RE	O	OP	SRM	
Demand planning and forecasting					
# of integrated business processes across partner networks					

CRDO

IP
% of reject...

Company policies and p...
...d forecasting
...es across
# of ope

CMO	FL/RE	O	MS	ERP	24
Servicing issues tracking					
% of phone calls adherence to script					

CMO	FL/RE	O	MS	CRM	24
Servicing issues tracking					
% of blocked calls					

CMO	FO	O	MS	SRM	2
Sales processing					
Adjust partner incentive plan to focus and reward joint interest					

# of ope
days

CM

CMO	FL/RE	O	MS	ERP	1
Customer servicing and contact history					
Agent adherence to schedule %					

CMO	FL/RE	O	MS	CRM	25
Customer servicing and contact history					
% of customers that are satisfied					

CMO	RO	O	MS	CRM	20
Customer relationship management					
# of customer relations skills					

CRDO
Pr...
Average tim...
products/serv...

CMO	FL	O	MS	ERP	23
Customer servicing and contact history					
...r call work time					

CMO	FL/RE	O	MS	CRM	23
Customer servicing and contact history					
% of email inquiries responded within 24 hours					

CIO	RO	O	IT		16
Information resource man...					
# and % of product knowle...					

CRDO VA
Product deploy...
New product turn around time

# of ser...

# of ser...

ERP 24

| CMO | FL/RE | O | MS | CRM | 25 |
| **Servicing issues tracking** | | | | | |

DUPONT ROI ANALYSIS

FOR NON-ACCOUNTING

Return on Investment (ROI)

Net Profit Ratio

×

Total Asset Turnover Ratio

Net Income

/

Sales

Sales

/

Total Assets

Sales

−

Total Cost

Fixed Assets

+

Current Assets

Cost of Goods Sold

SG&A

Depreciation & Amortization

Interest

Tax

Prefer Dividend

Inventories

+

Acc. Receivables

+

Other Current Asset
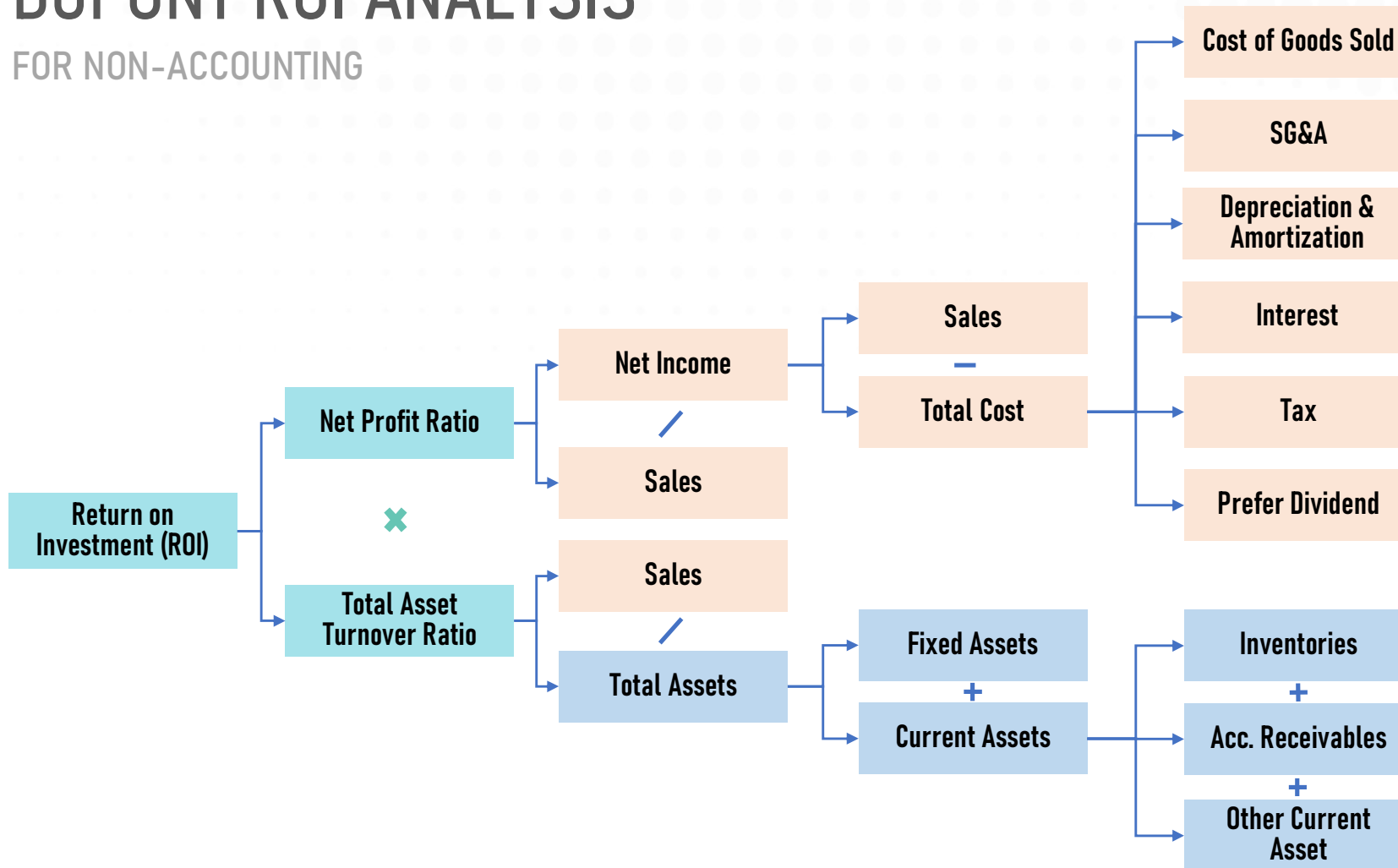
Planning for the Future

LAUNCH OF NEW STRATEGIC PLAN

ITE's sixth Strategic Plan, **ITE Create (2020-2024)**, was launched on 17 January 2020 at the annual ITE Work Plan Seminar. *ITE Create*, which follows **ITE Trailblazer (2015-2019)**, focuses on '*Skills for Future, Skills for Life*'. The new Plan will see ITE work towards four key thrusts:

- **Employability Resilience, Future Readiness** to prepare our students for a future workplace that sees changing and expanding job roles, as well as the emergence of 'hybrid' jobs.

- **Lifelong Learning, Workforce Adaptability** to help our alumni and adult learners deepen their skills and pick up new ones so they can progress in their careers.

- **Smart Learning, Smart Working** to build digital capabilities in both our staff and students. Not only will this equip our students with the necessary skills to perform in emerging digital jobs, it will also enable staff to improve efficiency and productivity in their respective work areas.

- **Agile Capabilities, Responsive Organisation** to ensure staff stay passionate and are ready for change.

A total of 16 programmes have been initiated to help us achieve these four key thrusts under **ITE Create**.

ITE CREATE (2020 – 2024)

SKILLS FOR FUTURE, SKILLS FOR LIFE

MISSION
Create Opportunities for Students and Adult Learners to Acquire Skills, Knowledge and Values for Employability and Lifelong Learning

VISION
A Trailblazer in Career Technical Education and Work-Study Training

VALUES
Integrity
Teamwork
Excellence
Care

GOAL 1 — Employability Resilience, Future Readiness

PROGRAMME
1. Deepen Skills through More **Progression** Opportunities
2. Adopt **Flexible Curriculum Structure** and Programming
3. Foster **Work Readiness** through 'Work Situation' Curricular Approach
4. Enhance **Student Success** and Engagement
5. Expand Students' **Internationalisation Mindset** and Cultivate **Entrepreneurship**

GOAL 2 — Lifelong Learning, Workforce Adaptability

PROGRAMME
6. Develop **Distinctive CET Niches** for Skills Upgrading of Adult Learners
7. Enhance **Outreach and Promotion** for Continual Upgrading of **ITE Alumni**
8. Expand **Work-Study Programmes** with Industry
9. Contribute towards **Industry Workforce Transformation** through Corporate Training Schemes and Solutions
10. Support **Companies' Productivity and Technology Improvements**

GOAL 3 — Smart Learning, Smart Working

PROGRAMME
11. Build **Hi-Tech** Learning Spaces and **Digital** Learning Approaches @ ITE Colleges
12. Leverage **Big Data and AI** for Student Learning and Performance Insights
13. Enable Customer-Centric **End-to-End Digital Services**

GOAL 4 — Agile Capabilities, Responsive Organisation

PROGRAMME
14. Enhance **Staff Engagement and Passion** at Work
15. Hone **Organisational and Staff Professional and Digital Capabilities** and **Industry Experience**
16. Enhance **Collaborative Partnerships** with Industry, Educational Partners and Stakeholders

EXPECTED OUTCOMES

- **Career-Ready, World-Ready and Future-Ready Graduates**
- **New Opportunities for Skills Transformation and Capability Development**
- **Digital Learning and Customised Services**
- **Collaborative Culture and Win-Win Partnerships**

ITE CREATE
(2020 – 2024)

SKILLS FOR FUTURE, SKILLS FOR LIFE

MISSION
Create Opportunities for Students and Adult Learners to Acquire Skills, Knowledge and Values for Employability and Lifelong Learning

VISION
A Trailblazer in Career Technical Education and Work-Study Training

VALUES
Integrity
Teamwork
Excellence
Care

GOAL 1 — Employability Resilience, Future Readiness

PROGRAMME

1. Deepen Skills through More **Progression** Opportunities
2. Adopt **Flexible Curriculum Structure** and Programming
3. Foster **Work Readiness** through 'Work Situation' Curricular Approach
4. Enhance **Student Success** and Engagement
5. Expand Students' **Internationalisation Mindset** and Cultivate **Entrepreneurship**

GOAL 2 — Lifelong Learning, Workforce Adaptability

PROGRAMME

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9. Contribute towards **Industry Workforce Transformation** through Corporate Training Schemes and Solutions
10. Support **Companies' Productivity and Technology Improvements**

GOAL 3 — Smart Learning, Smart Working

PROGRAMME

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12. Leverage **Big Data and AI** for Student Learning and Performance Insights
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GOAL 4 — Agile Capabilities, Responsive Organisation

PROGRAMME

14. Enhance **Staff Engagement and Passion** at Work
15. Hone **Organisational and Staff Professional and Digital Capabilities** and Industry Experience
16. Enhance **Collaborative Partnerships** with Industry, Educational Partners and Stakeholders

EXPECTED OUTCOMES

- Career-Ready, World-Ready and Future-Ready Graduates
- New Opportunities for Skills Transformation and Capability Development
- Digital Learning and Customised Services
- Collaborative Culture and Win-Win Partnerships

STRATEGIC TOTAL TRANSFORMATION

The highest goal of ITE's transformation was to change its status from one of a 'dead-end' option to an attractive, market-relevant and career-focused education option for kinaesthetic learners. For a start, ITE's mission evolved from a mere provider of technical education to become an institution that provides holistic development for its students — empowering them to be adaptable, creative and independent solution providers, with strong values towards self, others and the community.

A total development philosophy was adopted where curriculum and pedagogy extended beyond the acquisition of technical knowledge and skills. Thus, besides skills and knowledge, ITE's mission today includes a key element of nurturing values to land its graduates in good stead for challenges in the changing global environment, giving them the confidence, passion and resilience for their lives and careers. To improve public acceptance, and in turn, to attract students and motivate them to successfully complete their programmes, ITE adopted an integrated 4Ps Approach (People, Product, Place and Promotion) to remake itself.

HIS EARLY DAYS AT ITE

When I was asked to be the CEO of ITE, I realised that ITE was already an excellent organisation, with proven systems, processes and practices. It was the first education organisation to receive the Singapore Quality Award in 2005. My challenge was how to keep the 'ITE Heartbeat' pulsating, while adding new value to the organisation.

BRUCE POH DIRECTOR & CHIEF EXECUTIVE OFFICER (FROM 2007)

INTRODUCTION

1   *ITE Create (2020 – 2024*) is ITE's sixth five-year strategic roadmap, conceptualised after one year of planning and consultation involving more than 350 stakeholders. It builds on the foundation laid by the previous strategic plan – *ITE Trailblazer (2015 – 2019)*, while looking ahead to prepare ourselves for the challenges and changes in the environment, and in particular, the changing skills landscape.

ITE Create (2020 – 2024)
A Trailblazer in Career Technical Education and Work-Study Training

ITE Trailblazer (2015 – 2019)
A Trailblazer in Career and Technical Education

ITE Innovate (2010 – 2014)
A Global Leader for Innovations in Technical Education

ITE Advantage (2005 – 2009)
A Global Leader in Technical Education

ITE Breakthough (2000 – 2004)
A World-Class Technical Education Institution for a Knowledge-Based Economy

ITE 2000 (1995 – 1999)
An Established Post-Secondary Technical Education Institution

OUR TRANSFORMATION JOURNEY

VISION / OUR FOCUS	Established Post-Secondary Institution	World-Class Institution	A Global Leader in Technical Education	A Global Leader for Innovations in Technical Education
Innovations in Technical Education				
Global Outreach				
Strategic Partnerships				*ITE Innovate* (Fourth Wave)
Customer Focus			*ITE Advantage* (Third Wave)	
Systems & Infrastructure Improvement	*ITE 2000* (First Wave)	*ITE Breakthrough* (Second Wave)		
People Development				

Left: ITE's transformation journey was carried out in Four Waves, each led by a five-year Strategic Blueprint with ambitious Visions.

Below: These Strategic Roadmaps were developed into creatively-designed booklets for distribution to staff, partners and stakeholders.

From left:
ITE 2000 (1995 – 1999);
ITE Breakthrough (2000 – 2004);
ITE Advantage (2005 – 2009); and
ITE Innovate (2010 – 2014)

The 4Ps are, in fact, four essential elements for successful transformation. Each of the strategic plans recognised the importance of the 4Ps and addressed them with concrete strategies and measures.

The 4Ps are:
- **People Transformation** (Staff, Culture and Capabilities)
- **Product Transformation** (Certifications and Programmes)
- **Place Transformation** (Infrastructure and Learning Environment)
- **Promotion Transformation** (Image, Branding and Communications)

The 4Ps are interconnected and build upon each other to augment the credibility and sustainability of ITE, ensuring that the transformation was total and comprehensive. 'No stones left unturned' could not have been more apt a description.

The key to transformation was *People*. It enhanced the capability of our staff in creating market-relevant courses and world-class learning facilities which, in turn, built a credible and positive image of ITE. *Product* transformation raised the status of ITE in the national certification process and produced the ITE graduates that employers wanted and Singapore needed. *Place* transformation had the most direct bearing on ITE's image and the morale of its people and students, as well as the extent and magnitude of improvements and innovation our products and courses could afford. Lastly, *Promotion* transformation affected the choices of students and parents as well as public perception of ITE and VTE. At the core of the 4Ps is the most important 'P' of all — Plan. Without forward strategic planning, clear roadmaps and comprehensive transformation plans, the other 4Ps would never have materialised.

THE WONDERFUL CHANGES AT ITE

When I first joined ITE as a Board Member in 1998, we had good facilities, but they were not outstanding. Today, with two regional and iconic campuses completed — ITE College East and ITE College West — the contrast is great. ITE campuses are equipped with state-of-the-art and modern learning, sports and recreational facilities. Our students are now immensely proud of the wide array of facilities available in ITE. Their morale has been lifted.

In the old days, when I attended the Graduation Ceremonies, some of the students looked small; their heads were down and they were not confident. Today, I can see the big difference, especially when they look smart in the respective uniforms of the courses they are taking and the careers they are pursuing. The students are more confident and their presentation and communication skills have improved tremendously. They are also more engaged in learning and have goals. They ask good questions and are more confident in their responses. When I meet the students, I often asked them: 'What do you want to do after you graduate?' Without fail, many will say they want to progress to the polytechnics. They all seem to have a purpose. I am touched and extremely proud of how far they have come. That gives me a sense of satisfaction that we are doing the right thing.

In the past, ITE graduates did not make much of an impact on employers. They were always the last to be selected, compared to polytechnic and university graduates. Even if they were hired, employers had to invest heavily in getting them ready for the job. Today, our graduates' skills are much more aligned to the job requirements, partly because of the involvement of industry in the curriculum planning, development and
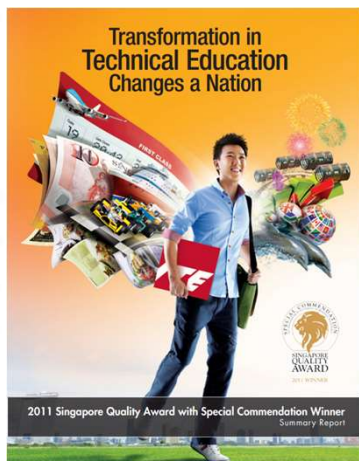
ตัวอย่างตัววัด ที่ถูกนำไปใช้งานได้ (Actionable Information)

Table 4.7: Measuring Employee Satisfaction
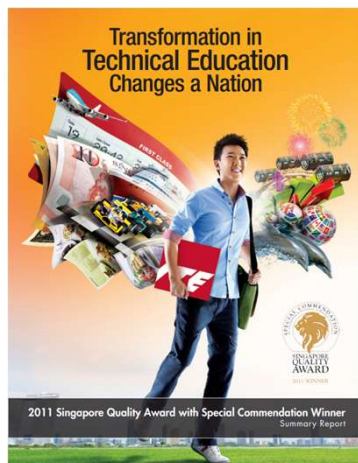
Mechanisms	Factors Measured	Frequency
1) **Organisation Climate Survey (OCS)**	13 Organisation Dimensions	Triennial
2) **Public Service Surveys**	Work-Life and Staff Satisfaction	Annual
3) **Staff Retention**	Staff Retention Levels	Annual
4) **Medical Leave**	Staff Health Levels	Annual
5) **Feedback from Staff & Unions**	General Staff Satisfaction and Labour Relations	On-going

4.5 EMPLOYEE PERFORMANCE AND RECOGNITION

Rewards and Recognition System Supporting High Performance Culture

To recognise and reward high performance and innovations, we have in place a comprehensive **Rewards and Recognition System** as summarised in <u>**Table 4.8**</u>. All in, we have **57 types of awards** to recognise and celebrate achievement of *"ITE Care"* values and results, via Individual and Team/Group awards.

Table 4.8: Key Categories of Rewards & Recognition Schemes

Performance Behaviours Recognised	No. of Award Types	Individual	Team/Group
1) High Performance and Contribution	8	8	-
2) Innovation & Creativity	16	5	11
3) Service Excellence	7	6	1
4) Teaching Excellence	12	6	6
5) Dedicated Service	9	9	-
6) Establishment Recognition Awards	5	3	2
TOTAL	**57**	**37**	**20**
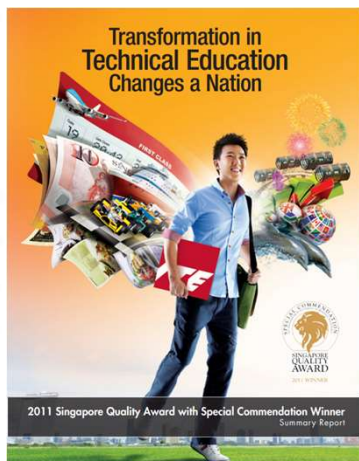
EMPLOYEE ENGAGEMENT

Employee Involvement in Innovations

ITE empowers staff at all levels through various employee innovation platforms (individual and team) to directly contribute ideas and suggestions that create value for customers and stakeholders. Our staff involvement in productivity and innovation projects (see **Table 7.6**) have been expanded under our enhanced 6E Employee Productivity and Innovation Framework rolled out in 2010.

In the last four years, team innovations have taken on new dimensions in ITE. Under the new focus, besides projects undertaken by the Innovation and Learning Circles (ILCs), team innovations have been extended to **industry and technology-based capability development projects** under ITE's Total System Capability (TSC) initiative (introduced in 2007). The aim is to enhance the professional capability and industry relevance of our academic staff.
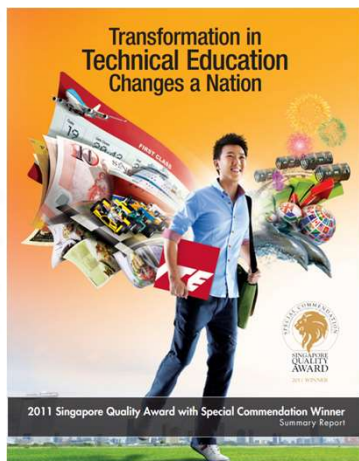
Table 7.6: Staff Participation in Productivity and Innovation (Individual & Teams)

KPI	2006	2007	2008	2009	2010
Idea Participation Rate (Individual)	94%	91%	94%	90%	94%
Target	≥ 90%	≥ 90%	≥ 90%	≥ 90%	≥ 90%
Team Participation Rate	100%	100%	100%	100%	100%
Target	≥ 100%	≥ 100%	≥ 100%	≥ 100%	≥ 100%

The shift towards quality innovation projects for greater impact on work processes has also shown positive results. Over a 5-year period (2006-2010), the implementation of the solutions from our ILC Innovation Projects and Staff Suggestions has helped ITE to save a substantial sum of **$7.55 million** for ITE.

Table 7.7: Staff Learning and Development Indicators

KPI	2006	2007	2008	2009	2010
No. of Learning Activities Available	15,700	14,381	9,645	10,000	11,000
No. of Staff Sponsored for Formal Programmes	49	66	108	240	137
Average learning Hours Per Staff	142	150	133	153	158
Target	≥ 120	≥ 120	≥ 120	≥ 120	≥ 130
Staff Professional Capability Level	-	38%	45%	57%	79%
Target	-	≥ 38%	≥ 43%	≥ 51%	≥ 65%

EMPLOYEE WELL-BEING AND SATISFACTION

As a people-oriented organisation, we are committed to creating a conducive and caring work environment and positive climate for staff satisfaction and well-being.

Organisation Climate Survey (OCS)

Since 2000, we carry out an independent Triennial **Organisation Climate Surveys** (OCS) to assess staff satisfaction levels based on 13 organisational dimensions. The findings from our past three OCSs revealed a steady overall Staff Satisfaction Index of **81%** since 2003, which leads the Public Service Norm in 2009. We have also achieved 'best-in-class' results compared with UK Government Benchmark and some other SQA Winners. Staff satisfaction with ITE's *'Organisational Culture'* is the strongest, at 84% in the latest 2009 survey.

Average Sick Leave Per Staff Per Year

The average number of sick leave days per staff has remained at a consistent level of around **3 to 4 days** per staff per year. Staff who did not take any sick leave also remained at consistent levels in the last 5 years. About **1 in 4 staff did not take any sick leave** in any one year. Based on available and comparable data with the whole of Civil Service and Statutory Boards, ITE's sick leave rates are at healthy levels.
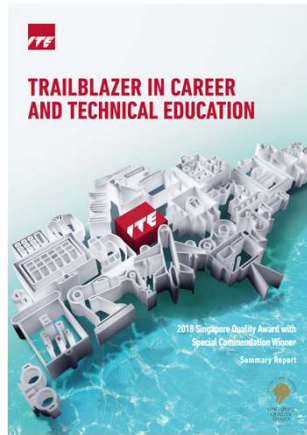
Satisfaction with Customer Services

a) Counter Services

Customers' satisfaction with our counter services has been consistently high and **above the 90% target** (see **Figure 1**). ITE's counter staff have also exceeded customer expectations in *service attitude*, *job knowledge* and *efficiency* from 2012 to 2017, with the exception in Year 2013, where the key registration period coincided with the big move to Ang Mo Kio for HQ and College Central. There were a high number of enquiries and walk-ins for courses during intake and matriculation period at College Central, where the Customer & Visitor Centre had to handle many other walk-in visitors.

Figure 1: Customers' Satisfaction by Service Attributes (Counter Services)
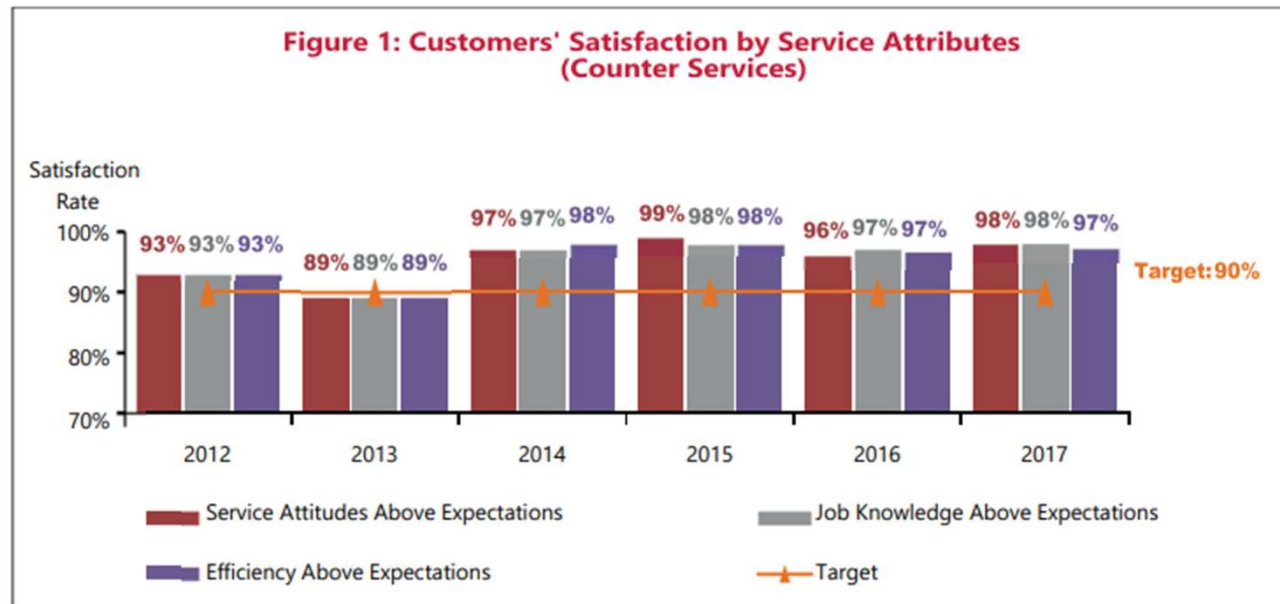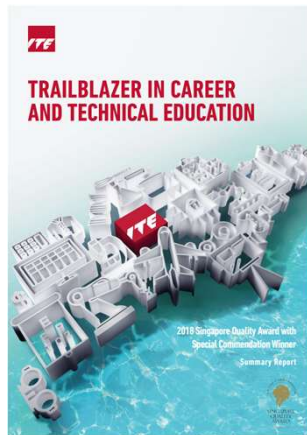
b) Telephone Service

Customers' satisfaction with the telephone service provided by our staff has been on an improving trend, from **86% in 2012 to 98% in 2017** (see **Figure 2**). ITE's telephone service had **exceeded** customer expectations in call handling and product knowledge almost all the time. With the enhancement of the iStudent Portal on 2014, the overall experience improved since FY2014.

Figure 2: Excellent Customers' Satisfaction by Service Attributes (Telephone Services)

*HQ & College Central move to new location

Figure 3: Percentage of Online Transactions Completed (within 15 mins)
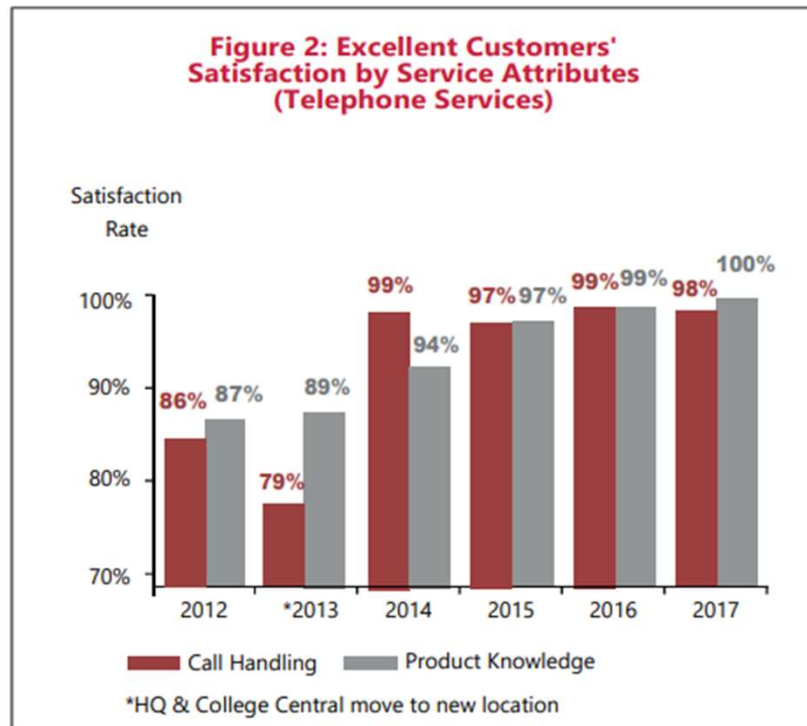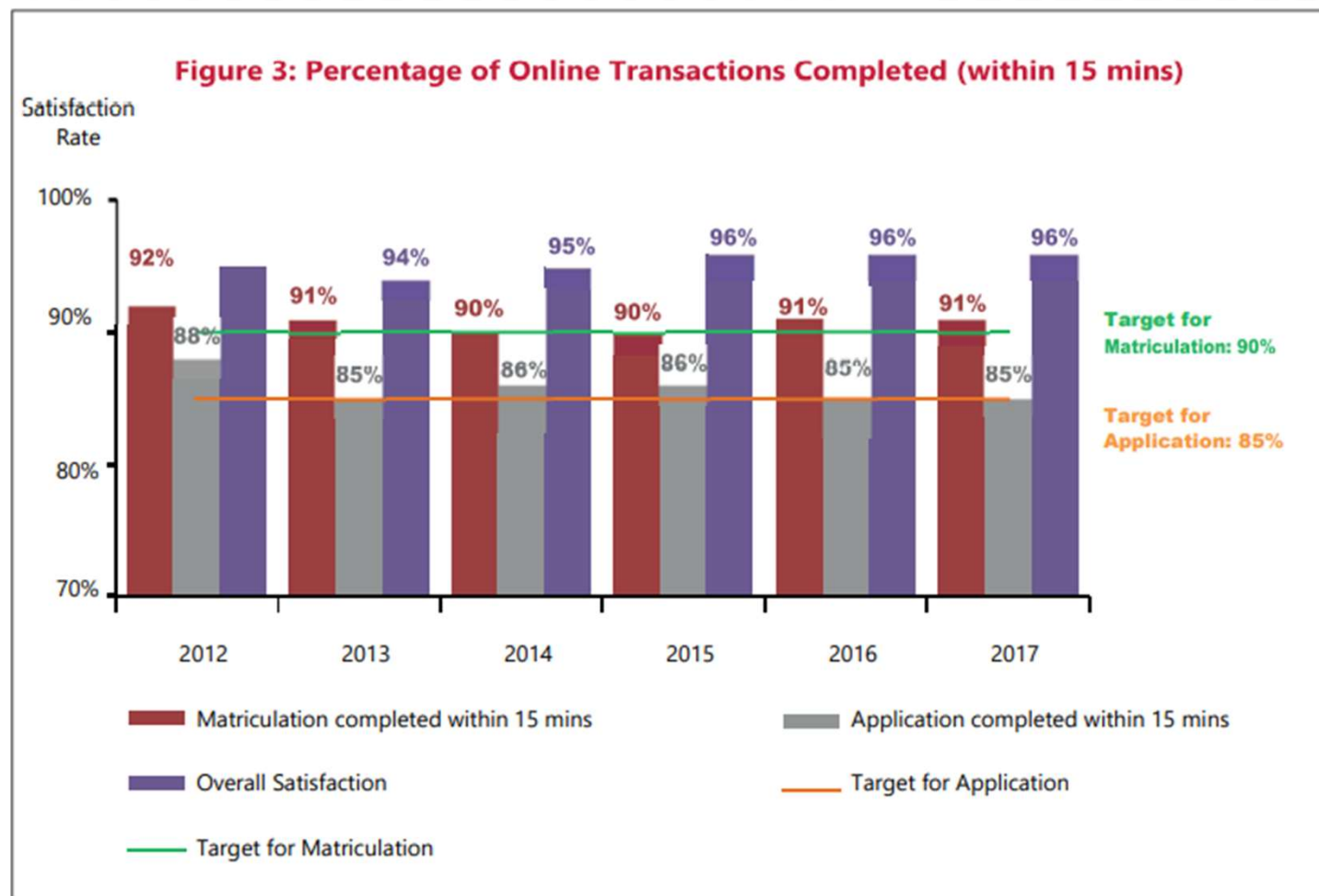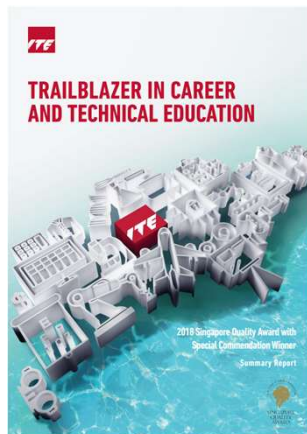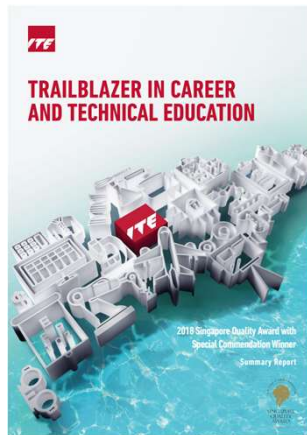
Public Service Audits

The Minimum Service Standards audit started in Year 2014, focusing on Counter, Telephone and Email services to assess how well our frontline service fare with the minimum service standards set out by PSD (PMO). In Year 2015 and 2016, most of the agencies, including ITE, scored around 84%. ITE performed very well in 2017 surpassing the average of similar agencies (see **Figure 4**).

Figure 4: Public Service Minimum Service Standards Audit
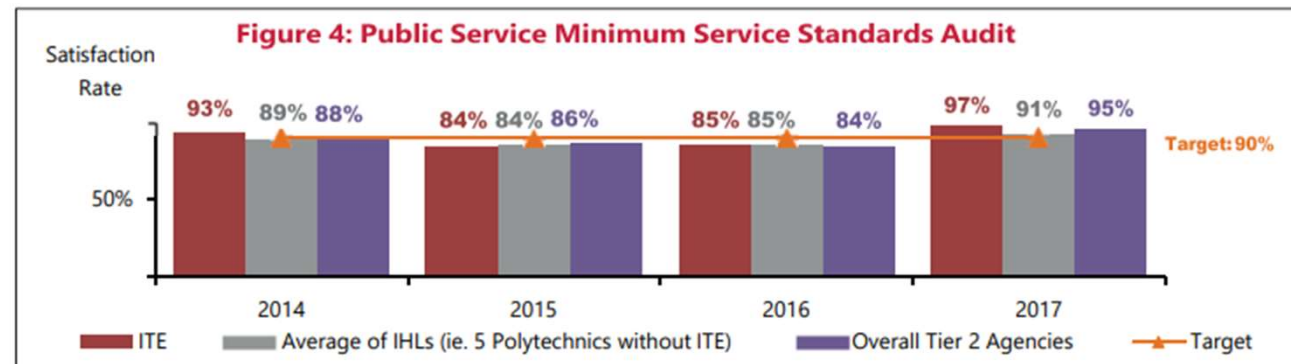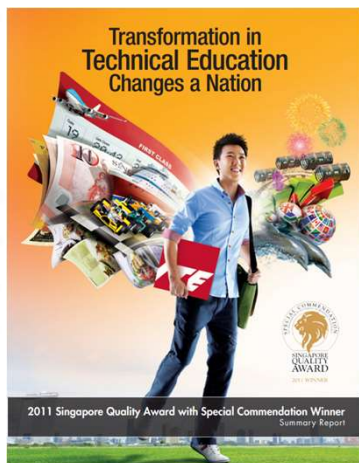
CUSTOMER SATISFACTION

Satisfaction with ITE Education

At the end of every study term, our full-time and part-time students give feedback on their education experience through a **Student Satisfaction Survey** that focuses on Teaching Effectiveness (covering Lecturer's delivery, knowledge level and care for students), learning facilities and equipment. Overall, our **full-time students' satisfaction and part-time students'** satisfaction have **remained high** from 2006 to 2010, as reflected in **Tables 7.1a and 7.1b**.

Table 7.1a: Students' Satisfaction with Full-time ITE Education

KPI	2002	2006	2007	2008	2009	2010
Students' Satisfaction with Full-time ITE Education	80%	95%	95%	94%	94%	94%
Target	≥ 80%	≥ 90%	≥ 90%	≥ 90%	≥ 90%	≥ 90%

Table 7.1b: Students' Satisfaction with Part-time CET Programmes

KPI	2006	2007	2008	2009	2010
Students' Satisfaction with Part-time CET Programmes	95%	97%	97%	97%	98%
Target	≥ 90%	≥ 90%	≥ 90%	≥ 90%	≥ 90%
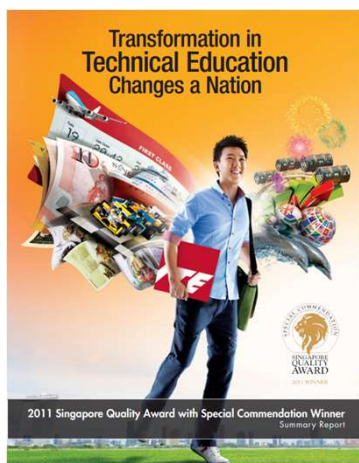
Table 7.2a: Customer Satisfaction with ITE's Counter Services

KPI	2006	2007	2008	2009	2010
Customer Satisfaction with ITE's Counter Services	93%	99%	99%	99%	98%
Target	≥ 85%	≥ 90%	≥ 95%	≥ 95%	≥ 98%

Table 7.2b: Customer Satisfaction with ITE's Telephone Services

KPI	2006	2007	2008	2009	2010
Customer Satisfaction with ITE's Telephone Services	79%	84%	87%	83%	86%
Target	≥ 80%	≥ 80%	≥ 85%	≥ 85%	≥ 85%

Table 7.2c: Customer Satisfaction with ITE's Web Services

KPI	2006	2007	2008	2009	2010
Customer Satisfaction with ITE's Web Services	94%	94%	95%	94%	95%
Target	≥ 90%	≥ 90%	≥ 90%	≥ 90%	≥ 90%

Transformation in
Technical Education
Changes a Nation

2011 Singapore Quality Award with Special Commendation Winner
Summary Report

.D., CISA

PRODUCT & SERVICE PERFORMANCE

Student Success Rate

Success Rate is the measure of final training success of ITE's full-time programmes, taking into consideration student retention from entry point to the attainment of ITE Certifications. Between 2006 and 2010, ITE has consistently achieved high student success, with at least 8 out of every 10 students graduating with ITE Certification, exceeding that of world renowned international educational institutions in the USA, Australia and the OECD Countries, which ranged from 50% to below 80%.

Graduate Employability

We conduct **Annual Graduate Employment Surveys** on our full-time graduates who are new entrants in the labour market, to assess the value of ITE education. Despite the less-than-buoyant job market in last few years, our graduates were able to secure jobs within six months after graduation (see **Table 7.3**). This is strong testimony to the high market relevance of an ITE education.

Table 7.3: Graduate Employment Rate

KPI	2006	2007	2008	2009	2010
Full-time Graduates' Employment Rate	89%	93%	90%	84%	88%

Employers' Satisfaction

The biennial **Employers' Satisfaction Survey** also saw strong endorsement on the quality of ITE's programmes and education system. Consistently, over 90% (exceeding targets) of employers are satisfied our graduates (see **Table 7.4**).

Table 7.4: Employers' Satisfaction with ITE Graduates

KPI	2006	2007	2008	2009	2010
Employers' Satisfaction with ITE Graduates	95%	94%	94%	91%	91%
Target	≥ 90%	≥ 90%	≥ 90%	≥ 90%	≥ 90%

MARKETPLACE RESULTS

Cohort Capture

Over the last three years, we have consistently met or exceeded the targeted national cohort capture rate of 25% (of the annual cohort of school leavers) being set by MOE.

Demand for ITE Courses

With the increasing acceptance of ITE as a choice institution, both total full-time student intake and enrolment have **more than doubled** compared with 15 years ago (see **Tables 7.5a & 7.5b**). Both total student intake and enrolment reached **record high of 14,490 and 25,620** in 2010, respectively.

Table 7.5a: Student Intake

KPI	1995	2000	2005	2010
Student Intake	7,082	10,701	13,819	14,490

Table 7.5b: Student Enrolment

KPI	1995	2000	2005	2010
Student Enrolment	11,860	17,965	23,029	25,620

Brand Equity Index

Since 1997, ITE has commissioned an independent Triennial **Brand Equity Study** to establish key stakeholders' and public perception of ITE vis-à-vis other post-secondary institutions. The studies have clearly shown that ITE has successfully turned around its image since becoming a post-secondary institution in 1992, from an overall Brand Equity of 34% in 1997 to 69% in 2010 (a significant 35 percentage points increase).

MISSION
GOALS

GOALS

PRACTICE

PLANNING
DESIGN

ACTION

SUCCESS

SKILLS

TECHNICAL
LOGICAL

EVALUATE
— QUALITY
— QUANTITY

ก. การวัดผลการดำเนินงาน (Performance Measurement)

2. ข้อมูลเชิงเปรียบเทียบ   **OVERALL: How** do you **select comparative data and information** to support fact-based **decision making**?

STRATEGIC PLANNING	PROCESS

Feedback loop

Feedback loop

Input

Improve

Approach

Actionable Information

4 Strategic Planning Process (SPP) **(2.1a)**

3 Processes

2 Performance

1 Decision Making

2. KEY Result ที่สำคัญ ต่อ **Daily Operations**

KEY Data & Information (รวบรวม ข้อมูลจากแหล่งต่าง ๆ ที่ใช้ในการตัดสินใจ

1. KEY Result ที่สำคัญ ต่อ **Performance Excellence**

• BENCHMARKING (<u>Process</u>) +

• Comparative data & Information [BENCHMARKING <u>Result</u>]

75

2

- **Benchmarking** is identifying **PROCESSES** and **RESULTS** that represent best practices and performance for similar activities, inside or outside the education sector.
- **Competitive comparisons** relate your performance to that of competitors and other organizations providing **similar programs and services**.

The case for comparative data. The use of comparative data and information is important to all organizations. The major premises for their use are the following:

- Your organization needs to know where it stands relative to competitors and to best practices.
- Comparative information and information obtained from benchmarking often provide the impetus for significant ("breakthrough") improvement or transformational change.
- Comparing performance information frequently leads to a better understanding of your processes and their performance.
- Comparative performance projections and competitors' performance may reveal organizational advantages as well as challenge areas where innovation is needed.

Comparative information may also support organizational analysis and decisions relating to core competencies, partnering, and outsourcing.

Selecting comparative data. Effective selection of comparative data and information requires you to determine needs and priorities and establish criteria for seeking appropriate sources for comparisons—from within and outside the education sector and your market.

3.2 COMPARISON AND BENCHMARKING

We adopt a **six-step "PAIR" Benchmarking Model** (**P**lan, **A**nalyse, **I**ntegrate and **R**eview) (see **Figure 3.5**) last enhanced in 2009. Using the PAIR model, two main types of benchmarking and comparison activities are conducted in ITE:

1) *Internal Comparison and Benchmarking* on strategic KPIs (eg. Student Satisfaction and Success Rate) and internal processes and best practices that impact student learning and educational outcomes.

2) *External Comparison and Benchmarking* with local and overseas educational and non-educational organisations to review and reform our education approaches and processes.

Figure 3.5: ITE's Enhanced Benchmarking Model (PAIR)

PHASES	STEPS	CRITERIA
PLAN	(1) Determine Benchmark Area	**Criteria for selecting benchmark areas** (A) Critical to the achievement of a **strategic goal** (B) Critical in improving education outcomes, or operating performance, resulting in **value add** for customers and/or **key stakeholders** (C) Challenges ITE to be **innovative** and to **stretch the organisation** for organisational and academic excellence
PLAN	(2) Select Benchmark Partner	**Criteria for selecting benchmark areas** (A) Partner is **accredited or well-recognised** (eg. Award winner) by external agencies for organisational excellence; OR (B) Partner is **renowned** for its world-class processes (e.g Ritz Carlton for customer service)
PLAN	(3) Determine Information Collection Method and Collect Information	
ANALYSE	(4) Identify Learning Points/Best Practices & Performance Gaps	
IMPLEMENT	(5) Develop and Implement Action Plans (including Setting Stretch Targets)	
REVIEW	(6) Monitor Results and Review Benchmarks	

As a result of our active drive for benchmarking, ITE has implemented many breakthrough innovations in VTE over the years, such as the internationally-renowned **'Developing A CUrriculuM' (DACUM)** for competency-based/occupational curriculum development model adopted from Ohio State University, USA, since mid-1990s and Germany's **Key Competencies Model** (Technical, Methodological and Social Competencies) implemented since 1996 – all of which have been instrumental in enhancing ITE's educational excellence. As a result of benchmarking our learning facilities, curriculum, and capability development approaches with renowned global institutions and organisations, ITE implemented the following 'best practices' in recent years:

- **Centre for Healthcare Simulation Training** (2006) – First of its kind in Singapore and the region amongst educational institutions, adopted from Medical Education Technologies, Inc (the leading Medical Centre in USA) to simulate ITE's healthcare environment to model closely a real-life hospital. Since its operation, the Centre has attracted high international acclaim and created a highly authentic teaching and learning environment for Nursing students.

- **New Niche Diplomas** (first in 2008) in collaboration with overseas MOU partners from Germany and France – the first international niche Diplomas to be offered outside the partners' home countries by ITE, adapting the curriculum of these partner institutions. The 3 Niche Diplomas have provided enhanced progression pathways for students.

Besides seeking benchmarking partners, we have also received increasing requests from local and international organisations who are keen to benchmark with us and learn our VTE knowledge and expertise, including the German institutions which are renowned for their world-class VTE. Some of our VTE approaches, programmes and expertise have been adapted or replicated by other countries (eg. Vietnam, Jordan, Philippines, Thailand, India and Nigeria).

PERSONAL BENCHMARKING

CAPABILITY

Link:
- Competitiveness
- Cat 5: Capability
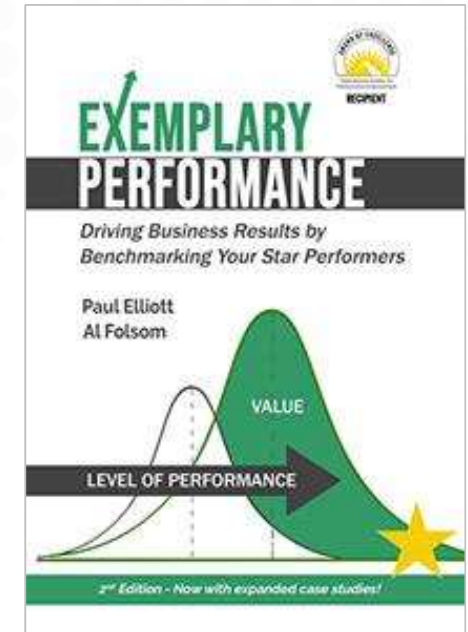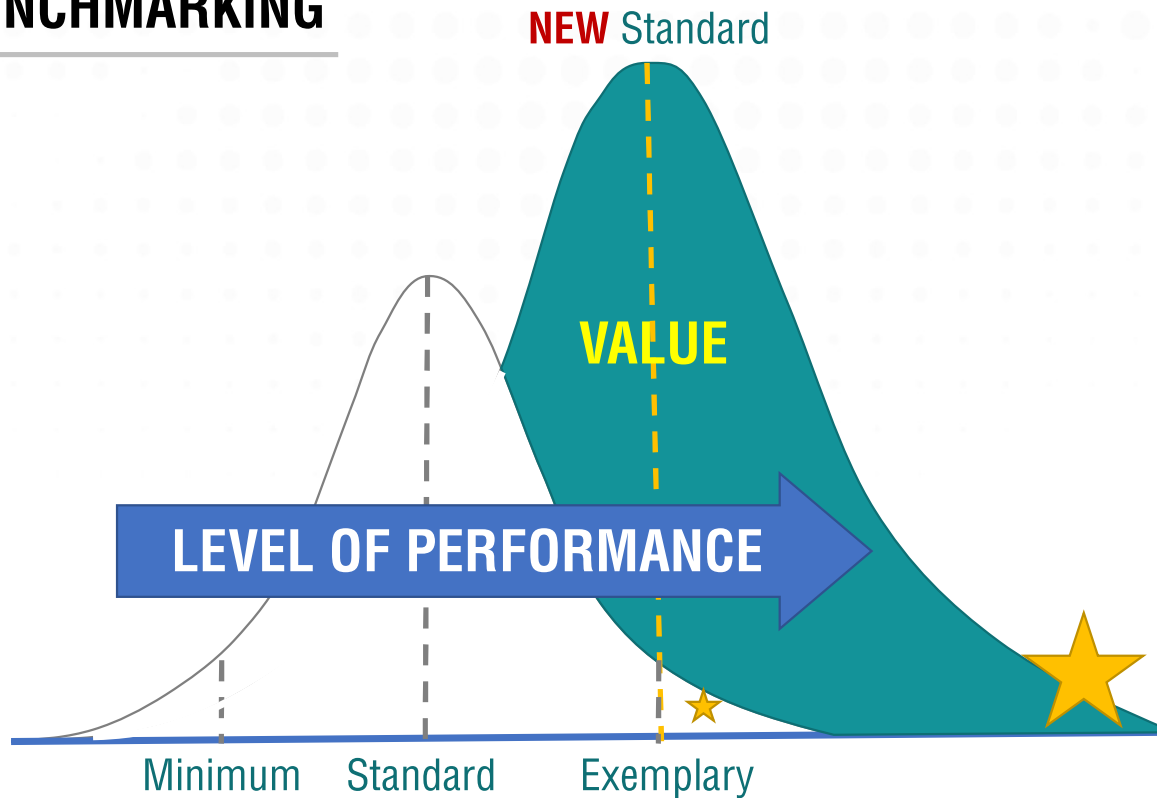
Replicating the accomplishments of your star performers.

Comparing Result, Replicating Practice

Ref: P. H. Elliott and A. C. Folsom, Exemplary Performance: Driving Business Results by Benchmarking Your Star Performers, John Wiley & Sons, 2022

ACCOMPLISHMENTS VERSUS BEHAVIOR

INFLUENCES	BEHAVIOR	ACCOMPLISHMENTS	GOALS
Skills/knowledge	Sell products	Revenues	PROFITS
Motivation	Make decisions	Plans	HIGH RETURNS
Supportive environment	Diagnose problems	Delighted customers	CUSTOMER SATISFACTION

Performance unfolds in this direction →

← We **analyze** this direction

Characteristics of star performers
- Competency
- Educational background
- Skills and knowledge
- Motivation
- 10,000 hours of experience
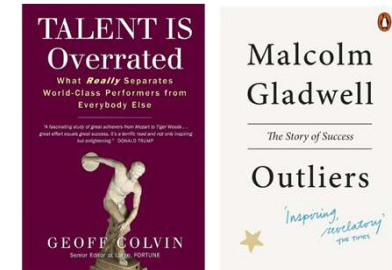
Ref: P. H. Elliott and A. C. Folsom, Exemplary Performance: Driving Business Results by Benchmarking Your Star Performers, John Wiley & Sons, 2022

Practice makes permanent, but only perfect practice makes perfect.

P. H. Elliott

Ref: P. H. Elliott and A. C. Folsom, Exemplary Performance: Driving Business Results by Benchmarking Your Star Performers, John Wiley & Sons, 2022

DELIBERATE

PRACTICE

Maximize our potential, Turns potential into reality

In his 2008 book, *Talent Is Overrated: What Really Separates World-Class Performers from Everybody Else*, Geoff Colvin makes the following points based on his synthesis of years of research:

- Talent (innate ability) does *not* account for the variance in performance seen in music, athletics, or business.
- Intelligence and memory do *not* account for it either.
- The single largest contributor to exemplary performance is <u>deliberate practice</u>.[1]

"Deliberate practice is characterized by several elements, each worth examining," Colvin writes. "It is actively designed specifically to improve performance, often with a teacher's help; it can be repeated a lot; feedback on results is continuously available; it is highly demanding mentally."[2]

Colvin also cites a study by Anders Ericsson that includes the following statement: "The differences between expert performers and normal adults reflect a life-long period of deliberate effort to improve performance in a specific domain."[3]

DELIBERATE PRACTICE

Just Practice

Skill
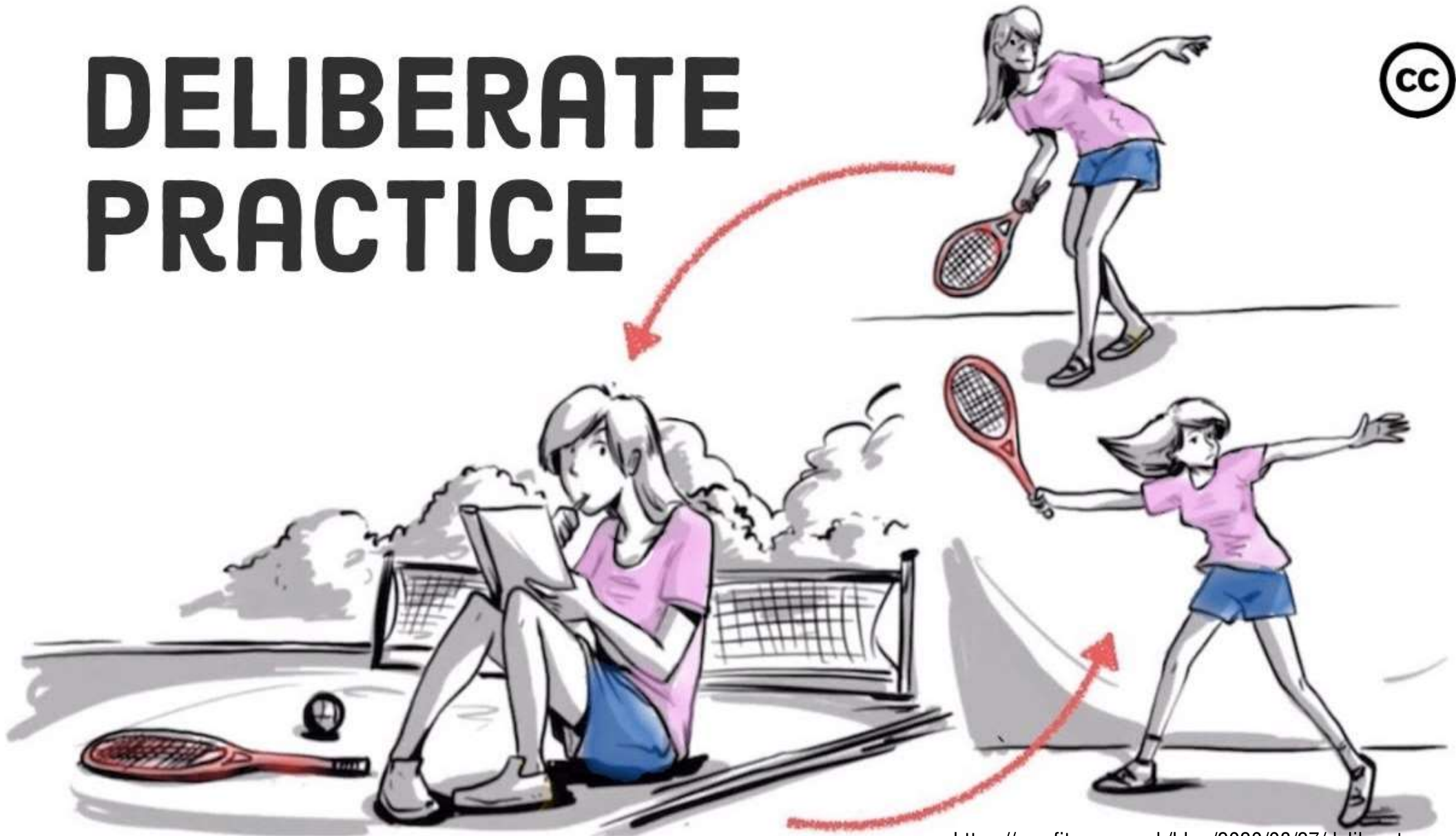
Time
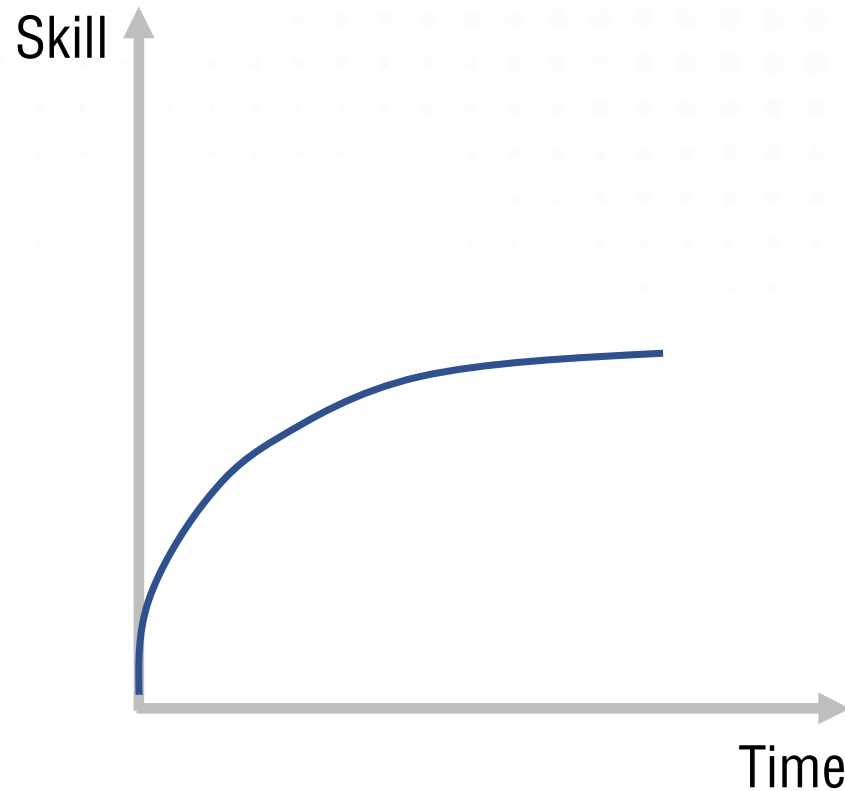
VS

Deliberate Practice

Skill

Time
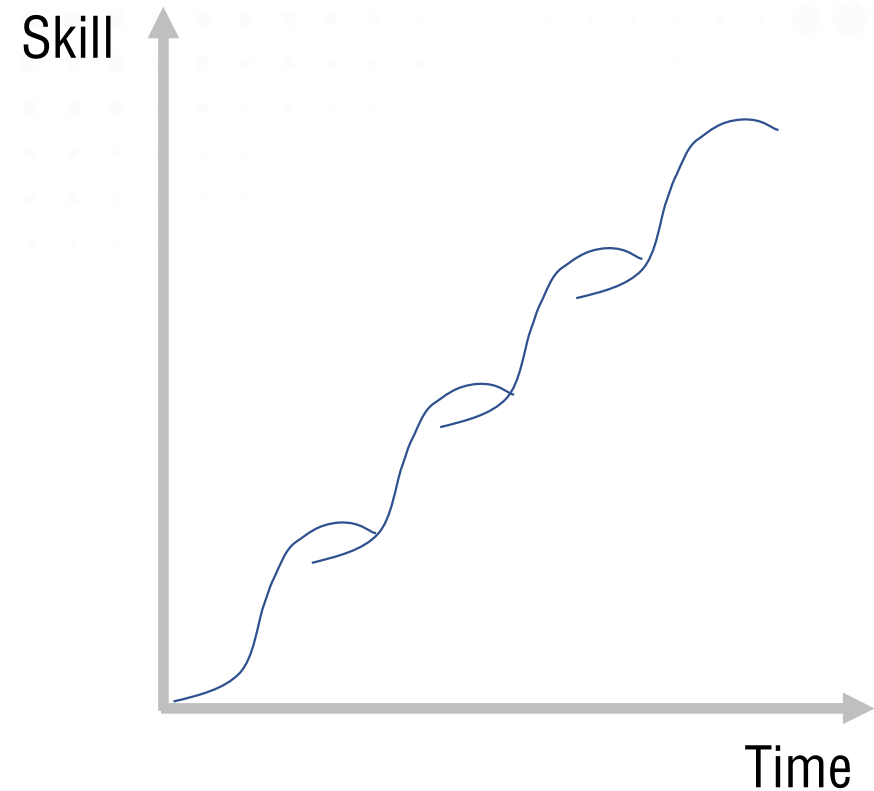
Petrosoniak, A., Lu, M., Gray, S. *et al.* Perfecting practice: a protocol for assessing simulation-based mastery learning and deliberate practice versus self-guided practice for bougie-assisted cricothyroidotomy performance. *BMC Med Educ* **19,** 100 (2019)
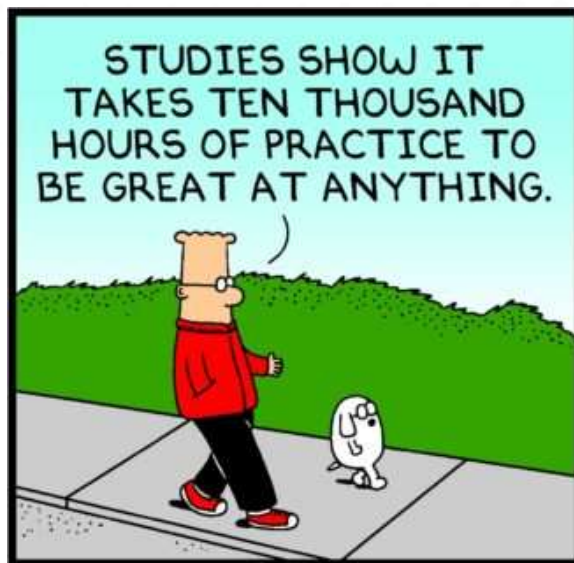
Microskill

Refinement — Practice — Feedback — Refinement (cycle)

Deliberate Practice
(w/ Consistence Effort)

Unstructured Practice

Performance

Time

PERSONAL BENCHMARKING

CAPABILITY

NEW Standard

Ways & Means are needed

Standardize, Productivity, Innovation
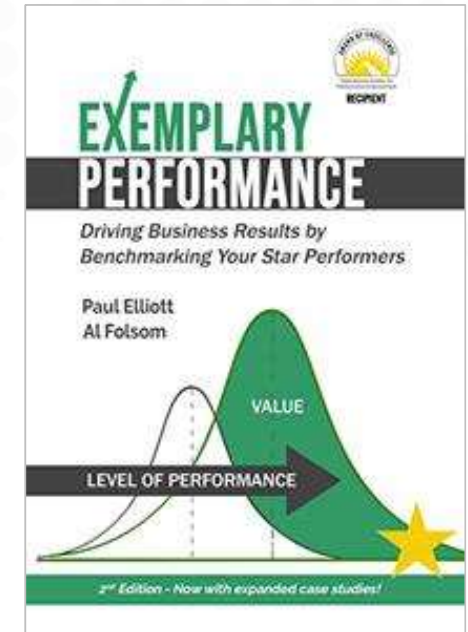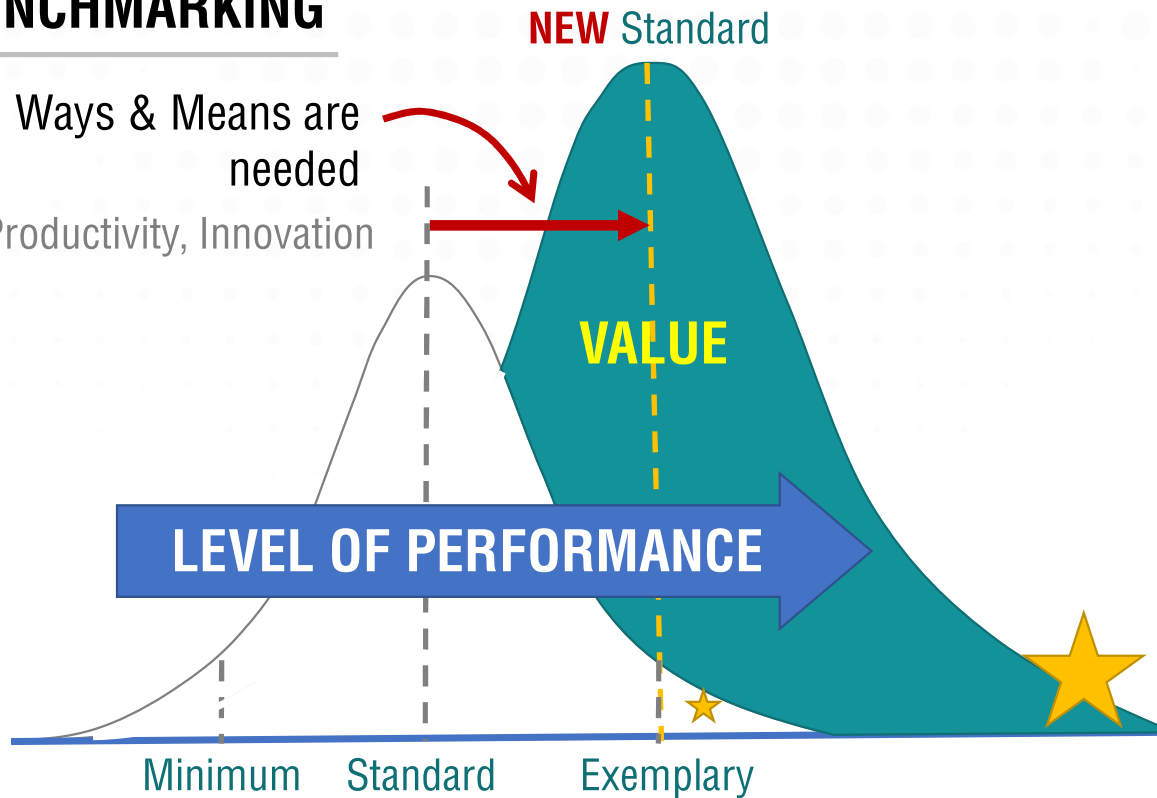
VALUE

LEVEL OF PERFORMANCE

Minimum   Standard   Exemplary

Replicating the accomplishments of your star performers.

Comparing Result, Replicating Practice

Ref: P. H. Elliott and A. C. Folsom, Exemplary Performance: Driving Business Results by Benchmarking Your Star Performers, John Wiley & Sons, 2022

ก. การวัดผลการดำเนินงาน (Performance Measurement)

3. ความคล่องตัวของการวัดผล **OVERALL: HOW** do you ensure that your Performance measurement system can respond to **rapid or unexpected** organizational or **external changes** and provide **timely data**?

STRATEGIC PLANNING	**PROCESS**

Loop นี้ทำงานได้ดีแค่ไหน

Feedback loop

Feedback loop

Input

Improve

Approach

Actionable Information

4 **Strategic Planning Process (SPP)** (2.1a)

3 **Processes**

2 **Performance**

1 **Decision Making**

2. KEY Result ที่สำคัญ ต่อ **Daily Operations**

KEY Data & Information (รวบรวม ข้อมูลจากแหล่งต่าง ๆ ที่ใช้ในการตัดสินใจ

1. KEY Result ที่สำคัญ ต่อ **Performance Excellence**

- PMS: Timely data & Respond to Rapid Changes

Notes:
- response to **regulatory changes**, other changes in the political environment, innovations in processes or
- business models, or new competitor offerings.

Information Dissemination

In terms of information accessibility and dissemination, ITE shares key information expeditiously with staff and external stakeholders through an extensive range of IT-based and non IT-based platforms (see **Table 4** for examples on how specific information are made accessible via different dissemination channels).

Table 4: Information Dissemination Channels

Target Groups	IT-based Platforms	Social/Interactive Platforms
Internal (within ITE) (Staff & Unions)	• **Analytics** (Student Attendance and Enrolment Dashboard, Business Intelligence Reports, Assessment Management Data Mart and Automated Attendance Alert System) • **Knowledge Hub** (Establishment / Functional Information and Circulars / Manuals) • **MyHR Portal** (e-HCS) • **KRIS** • **Email System and Lotus Notes** • **InnovaTE, eTEAM and iCARE** • **ITE Website**	• **ITE and Establishment Work Plan Seminars** • **Management Communications Platforms**, including Staff Events, such as *ITE Care* Festival, ITE Innovation Fiesta, ITE ExCEL Convention and ITE Teachers' Day • **Dialogues with Unions** • **Focus Groups** (on new strategic initiatives) • **Staff Induction Programmes** • **Key Publications and Videos: ITE Innovate** and *ITE Trailblazer* Brochures, ITE Service Handbook and annual ITE Corporate Highlights • **Posters on key OE Policies**
External (Customers, Stakeholders, Partners & Suppliers and Public)	• **iStudent** • **iDe'Lite** Videos • **ITE Website** • **Social Media** (Facebook, Twitter, Instagram)	• **ITE Prospectus and Publications** (eg. infinITE, IgnITE and Annual Report) • **Dialogues with Students and Staff** (by Chairman, CEO and Senior Leaders) • **Experience ITE Programme** (for Sec School Students) • **School Networking Activities, Open Houses & Talks** • **Media Publicity** • **Industry Partnership Forums** • **Sharing with Visitors to ITE and Foreign Partners Overseas**

ข. การวิเคราะห์ และทบทวนผลการดำเนินการ

OVERALL: How do you **REVIEW** your organization's **Performance** and **CAPABILITIES**? ① ②

STRATEGIC PLANNING	PROCESS

Input ← Feedback loop

Improve ← Feedback loop

Approach

Actionable Information

PERFORMANCE REVIEW

Strategic Planning Process (SPP) (2.1a)

Processes

Performance **Decision Making**

① Cat 5. Capability + Capacity
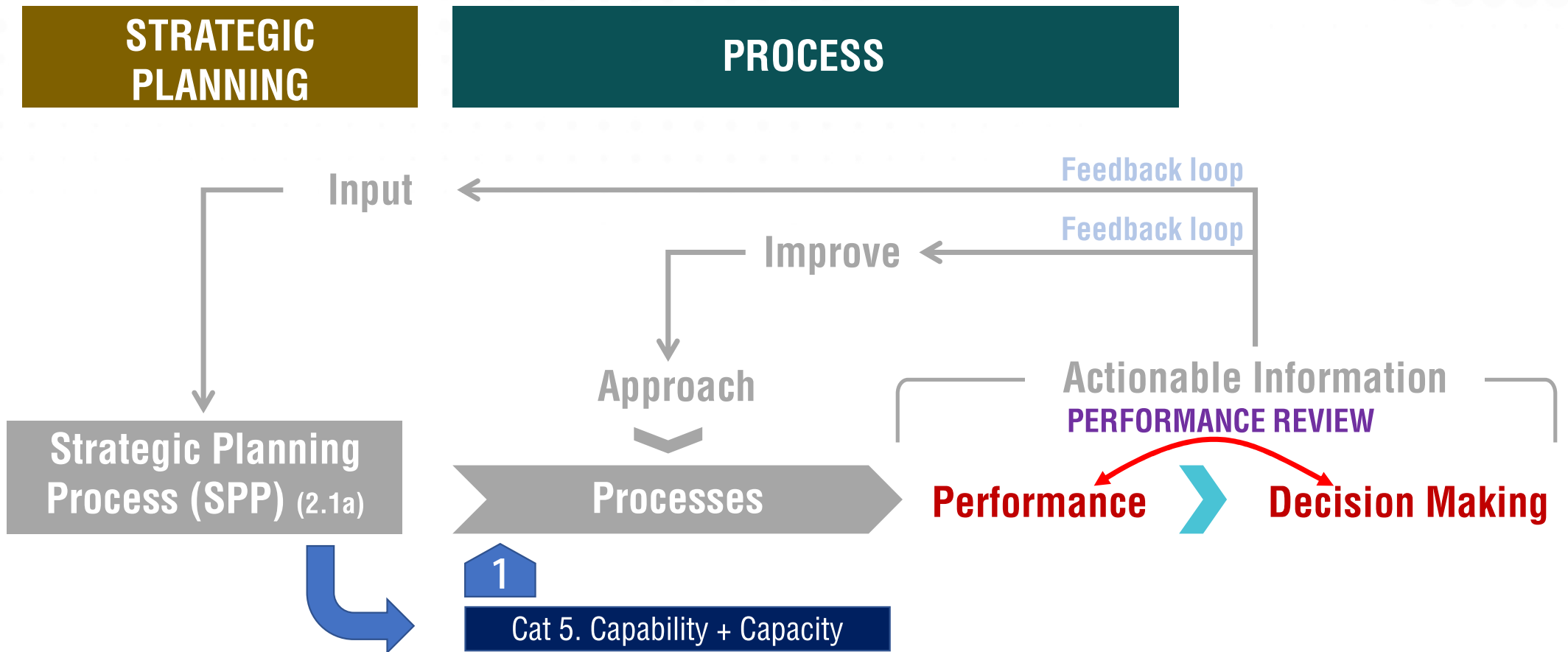
Criteria Commentary

IMPORTANT

① Performance Review

Reviewing performance. The organizational review called for in this item is intended to cover all areas of performance. This includes not only current performance but also how you project your future performance. The expectation is that the review findings will provide a reliable means to guide both improvements and opportunities for innovation that are tied to your key objectives, core competencies, and measures of success. Review findings may also alert you to the need for transformational change in your organization's structure and work systems. Therefore, an important component of your organizational review is the translation of the review findings into actions that are deployed throughout your organization and to appropriate suppliers, partners, collaborators, and key customers.

Use of comparative data in reviews. Effective use of comparative data and information allows you to set stretch goals and to promote major nonincremental ("breakthrough") improvements in areas most critical to your competitive strategy.

②
- หมวด 2: Work Systems,
- Structure (หมวด 5) Capability + อัตรากำลัง

-> ระบบ Performance Management System, (PMS), Succession Planning, Competency

Performance Review

IMPORTANT

Analyzing performance. Analyses that you conduct to gain an understanding of performance and needed actions may vary widely depending on your organization's type, size, competitive environment, and other factors. Here are some examples of possible analyses:

- How educational program and service improvements or new programs and services correlate with key student and other customer indicators, such as satisfaction, loyalty, and market share
- Trends in key indicators of student engagement, such as absenteeism, dropout rates, and use of educational programs and services
- Trends in formative and summative student assessment results, disaggregated by student segments, as appropriate
- The relationship among student experiences, outcomes, and program completion
- The relationship among student experiences, outcomes, and postprogram outcomes, such as in other schools or the workplace
- Activity-level cost trends in organizational operations
- The relationship between students' use of learning technologies and facilities and students' performance
- The relationship between student demographics and outcomes
- The percentage of students attaining licenses, industry-recognized certifications, or other professional credentials
- Student participation and achievement in advanced placement courses
- Return on investment for intelligent risks that you pursue

Performance Review

IMPORTANT

- Cost and budgetary implications of student- and other customer-related problems and effective problem resolution
- Interpretation of market changes in terms of gains and losses in students and other customers and changes in their engagement
- Trends in key operational performance indicators, such as productivity, student learning, waste reduction, and introduction of new programs or services
- Relationships among learning by workforce members, organizational learning, and the value added per workforce member
- Financial benefits derived from improvements in workforce safety, absenteeism, and turnover
- Benefits and costs associated with workforce education and training
- Benefits and costs associated with improved organizational knowledge management and sharing
- The relationship between knowledge management and innovation
- How the ability to identify and meet workforce capability and capacity needs correlates with retention, motivation, and productivity
- Cost and budgetary implications of workforce-related problems and effective problem resolution
- Individual or aggregate measures of productivity and quality relative to comparable organizations' or competitors' performance
- Cost trends relative to comparable organizations' or competitors' trends
- Relationships among program and service quality, operational performance indicators, and overall financial performance trends as reflected in indicators such as operating costs, budget, asset utilization, and value added per faculty/staff member
- Allocation of resources among alternative improvement projects based on cost/benefit implications or environmental and societal impact
- Net earnings or savings derived from improvements in quality, operational, and workforce performance
- Comparisons among organizational units showing how quality and operational performance affect budgetary

Criteria Commentary

IMPORTANT

Aligning analysis, Performance Review, and Planning

Aligning analysis, performance review, and planning. Individual facts and data do not usually provide an effective basis for setting organizational priorities. This item emphasizes the need for close alignment between your analysis and your organizational performance review and between your performance review and your organizational planning. This ensures that analysis and review are relevant to decision making and that decisions are based on relevant data and information. In addition, your historical performance, combined with assumptions about future internal and external changes, allows you to develop performance projections. These projections may serve as a key planning tool.

Understanding causality. Action depends on understanding causality among processes and between processes and results. Process actions and their results may have many resource implications. Organizations have a critical need to provide an effective analytical basis for decisions because resources for innovation and improvement are limited.

Leading & Lagging Key Indicator

Ref: https://officerofthewatch.com
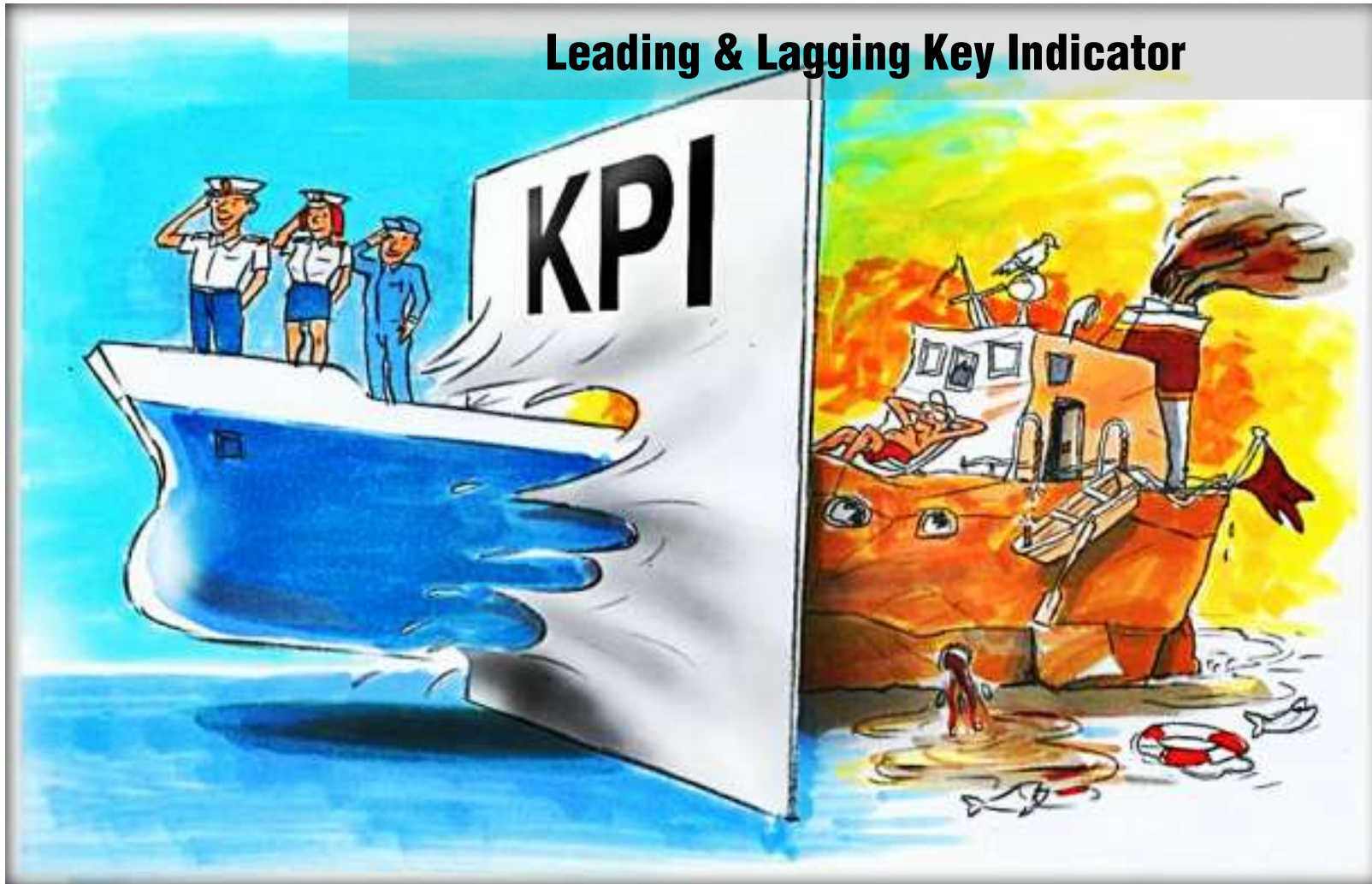
FOUNDATION

SCORE	DESCRIPTION
REACTIVE **0% or 5%**	• No SYSTEMATIC APPROACH to item questions is evident; information is ANECDOTAL. (A) • Little or no DEPLOYMENT of any SYSTEMATIC APPROACH is evident. (D) • An improvement orientation is not evident; improvement is achieved by reacting to problems. (L) • No organizational ALIGNMENT is evident; individual areas or work units operate independently. (I)
EARLY **10%, 15%, 20%, or 25%**	• The beginning of a SYSTEMATIC APPROACH to the BASIC QUESTION in the item is evident. (A) • The APPROACH is in the early stages of DEPLOYMENT in most areas or work units, inhibiting progress in achieving the BASIC QUESTION in the item. (D) • Early stages of a transition from reacting to problems to a general improvement orientation are evident. (L) • The APPROACH is ALIGNED with other areas or work units largely through joint problem solving. (I)
DEVELOPING **30%, 35%, 40%, or 45%**	• An EFFECTIVE, SYSTEMATIC APPROACH, responsive to the BASIC QUESTION in the item, is evident. (A) • The APPROACH is DEPLOYED, although some areas or work units are in early stages of DEPLOYMENT. (D) • The beginning of a SYSTEMATIC APPROACH to evaluation and improvement of KEY PROCESSES is evident. (L) • The APPROACH is in the early stages of ALIGNMENT with the basic organizational needs identified in response to the Organizational Profile and other process items. (I)
MATURE **50%, 55%, 60%, or 65%**	• An EFFECTIVE, SYSTEMATIC APPROACH, responsive to the OVERALL QUESTIONS in the item, is evident. (A) • The APPROACH is well DEPLOYED, although DEPLOYMENT may vary in some areas or work units. (D) • Fact-based, SYSTEMATIC evaluation and improvement, and some examples of use of best practices, instances of INNOVATION, or sharing of refinements, are in place for improving the efficiency and EFFECTIVENESS of KEY PROCESSES. (L) • The APPROACH is ALIGNED with your overall organizational needs as identified in response to the Organizational Profile and other process items. (I)

IMPORTANT

Measures and Indicators

MEASURES AND INDICATORS. Numerical information that quantifies the input, output, and performance dimensions of processes, programs, projects, services, and the overall organization (outcomes). Measures and indicators might be simple (derived from one measurement) or composite.

The Education Criteria do not distinguish between measures and indicators. However, some users of these terms prefer "indicator" (1) when the measurement relates to performance but does not measure it directly (e.g., the number of complaints is an indicator but not a direct measure of dissatisfaction) and (2) when the measurement is a predictor ("leading indicator") of some more significant performance (e.g., a gain in student performance or satisfaction might be a leading indicator of student persistence).

MEASURES AND INDICATORS : ตัววัดและตัวชี้วัด

"ตัววัดและตัวชี้วัด" หมายถึง สารสนเทศเชิงตัวเลขที่บอกปริมาณปัจจัยนำเข้า ผลผลิต และผลการดำเนินการในมิติต่าง ๆ ที่เกี่ยวข้องกับกระบวนการ (ตั้งแต่หมวด 1 - 6) หลักสูตร โครงการ บริการ และผลการดำเนินการโดยรวมของสถาบัน (ผลลัพธ์) ตัววัดและตัวชี้วัด อาจเป็นแบบง่าย ๆ (ได้จากตัววัดเดี่ยว) หรือเป็นการใช้ตัววัดหลายตัวมาประกอบกัน

เกณฑ์ EdPEx นี้ ไม่ได้แบ่งแยกระหว่างตัววัดและตัวชี้วัด อย่างไรก็ตาม มีผู้นิยมใช้คำว่า "ตัวชี้วัด" ในกรณีดังนี้

(1) เมื่อการวัดนั้นมีความสัมพันธ์กับผลการดำเนินการ แต่ไม่เป็นตัววัดผลการดำเนินการนั้น โดยตรง (เช่น จำนวนข้อร้องเรียนเป็นตัวชี้วัดความไม่พึงพอใจแต่ไม่ใช่ตัววัดผลความไม่พึงพอใจ โดยตรง) และ

(2) เมื่อการวัดผลเป็นตัวทำนาย "ตัวชี้วัดนำ" (Leading indicator) ของผล การดำเนินการด้านอื่น ๆ ที่สำคัญกว่า (เช่น ความพึงพอใจของผู้เรียนที่เพิ่มขึ้น อาจเป็นตัวชี้วัดถึง การคงอยู่ของผู้เรียน)

Performance Jargons

Measure
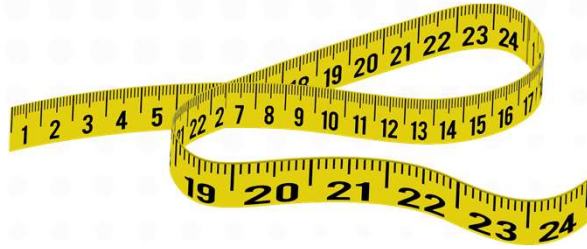
Metrics

Indicator
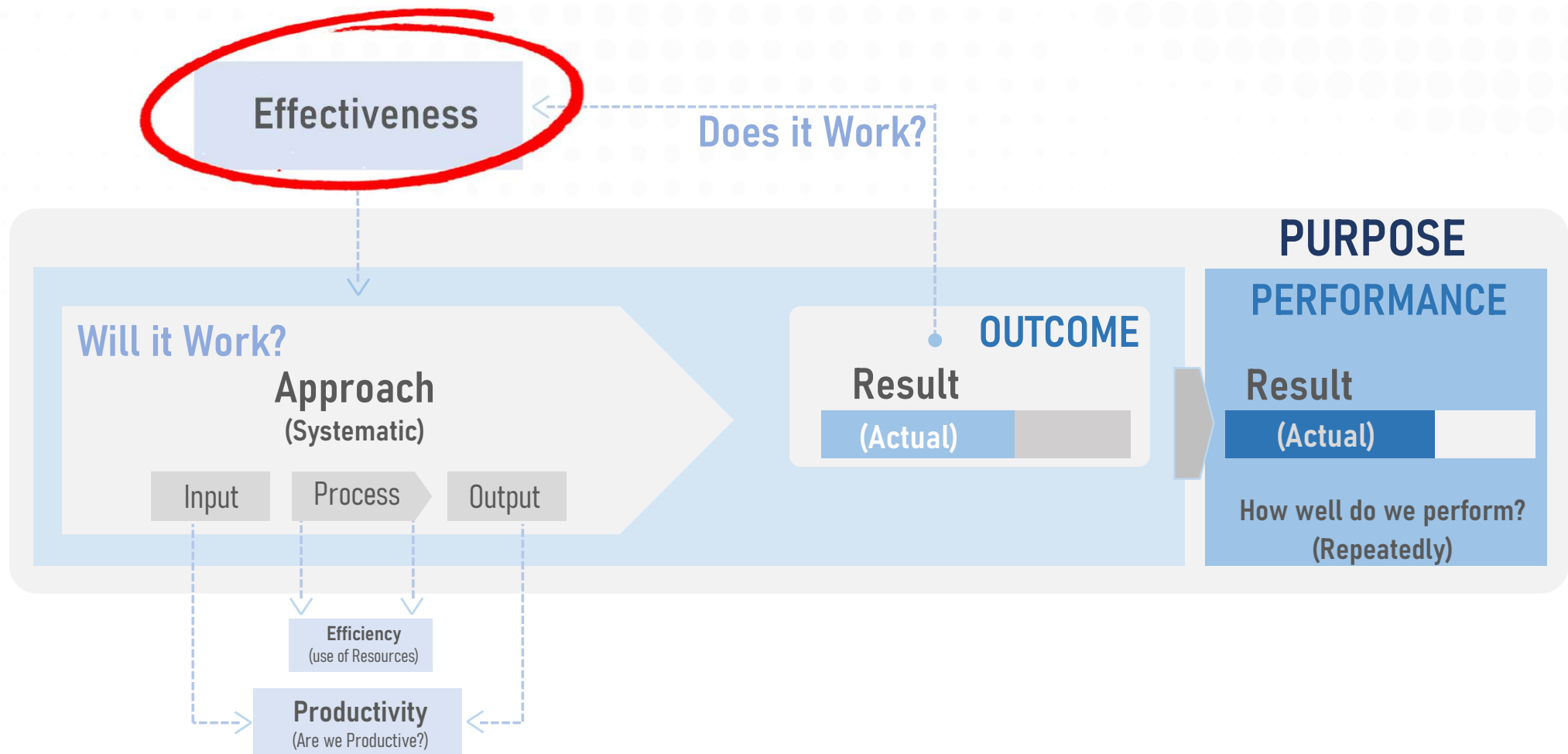
IMPORTANT

Effective

EFFECTIVE. How well a process or a measure addresses its intended purpose. Determining effectiveness requires (1) evaluating how well the process is aligned with the organization's needs and how well it is deployed, or (2) evaluating the outcome of the measure as an indicator of process, program, or service performance.

EFFECTIVE : ประสิทธิผล

"ประสิทธิผล" หมายถึง การพิจารณาว่ากระบวนการหรือมาตรการที่ใช้สามารถ **ตอบสนองเจตจำนงที่ตั้งไว้ได้ดีเพียงใด** การประเมินประสิทธิผลต้อง (1) ประเมินว่าแนวทางนั้นมีความสอดคล้องไปในทิศทางเดียวกันกับความจำเป็นของสถาบัน และสถาบันสามารถนำแนวทางไปปฏิบัติได้ดีเพียงใด หรือ (2) การประเมินผลลัพธ์ของวิธีการที่ใช้ โดยพิจารณาจากตัวชี้วัดของกระบวนการ การจัดการศึกษา วิจัย และบริการฯ

effective

Collins COBUILD

(ɪfektɪv 🔊 ⓘ)

Explore 'effective' in the dictionary
- -

ADJECTIVE

> Something that is effective works well and produces the results that were intended. [...]

Measures of Effectiveness (MOEs) assess changes in system behavior, capability, or operational environment that **is tied to measuring the attainment of an end state, achievement of an objective, or creation of an effect.**

Jason Andress and Steve Winterfeld, in Cyber Warfare (2nd Edition), 2014

Teaching Effectiveness

We monitor the teaching effectiveness of our Lecturers through annual Student Feedback Survey. Our students have consistently rated our Lecturers highly, with excellent ratings of **96% to 97%** since FY2012.

Effectiveness – Marketing effectiveness measures how well the work of Marketing is helping the organization **ACHIEVE IT OUTCOMES**. These metrics enable you to determine whether the **right actions being taken to meet the given outcomes**.

Examples of effectiveness metrics are those that help you understand the role Marketing is playing in acquiring and retaining customers. Effectiveness metrics guide decisions about strategy.

Program Objectives	Measure of Effectiveness
Program completions	Number of beneficiaries receiving the benefits
Reduce morbidity and mortality	Number of people suffering from arsenicosis
Ensure sound health	Percentage changes in life years gained
Ensure pure water supply	Number of people availing the pure water as compared with the number of people availed pure water before the project.

Cost-effectiveness analysis (CEA) is widely used to assess the investment criteria where cost-benefit analysis (CBA) is not economically feasible to apply

https://www.researchgate.net/figure/Examples-of-Effectiveness-Measures_tbl1_41891022

สรุป Effective ขึ้นกับ "ผลที่ต้องการบรรลุ" "as Intended to do"

ทั้งนี้ ได้ผล (As Intended to do - ตัวท้ายสุด - End) จะต่างกับ วิธีการ (Ways) และเครื่องมือ (Means)

มิติที่ 1: ถ้า เป้าหมายต้องการแค่การสอน (Teaching) ก็จบแค่นั้น แต่ถ้ากรอบมุมมองว่าสอนเพื่อบรรลุอะไร (Teaching Effectiveness) ตรงนั้น ต้องขยายออกมา และพิจารณาว่าได้ผล Yes/No **as intended** หรือไม่

มิติที่ 2: ส่วนการพิจารณาดู Effective Result หากเราต้องการที่จะปรับปรุง Approach (พิจารณาเรื่องการเลือกวิธีการว่าวิธีใด เหมาะไม่เหมาะ)

ตัวอย่าง

Ice-cream maker

ถาม

   A: 10 ถัง/ชั่วโมง   1. เครื่องใด**มีประสิทธิภาพ**ดีกว่ากัน

   B: 2 ถัง/ชั่วโมง

ตัวอย่าง 2

ให้ไปหยิบงบการเงิน

ถาม

   A: 10 นาที   1. ใครทำงาน**มีประสิทธิภาพ**ดีกว่ากัน

   B: 2 นาที

PERFORMANCE TERMINOLOGY

ผลผลิต/ผลิตผล   ผลลัพธ์   ผลสัมฤทธิ์

Effectiveness

Does it Work?

PURPOSE

PERFORMANCE

Will it Work?

OUTCOME

Approach
(Systematic)

Result
(Actual)

Result
(Actual)

How well do we perform?
(Repeatedly)

Input   Process   Output

Efficiency
(use of Resources)

Productivity
(Are we Productive?)

Effectiveness

Does it Work?

PURPOSE

Will it Work?

Approach
(Systematic)

OUTCOME

Result
(Actual)

PERFORMANCE

Result
(Actual)

e.g., Cost Eff., Quality, Delivery

SALE APPROACH	Approaches	Success Rate of Approaches (Effectiveness)	Result (Target 300 Purchased) @The End of the Day	@The End of the Day (Purpose: Total Sales)
	• Door to door sales	3/10 = 30%	15 Visited, => 1 Cust. (6.7%)	**100,000 Baht** Target: 150,000 Baht
	• Phone call sales	3/100 = 3%	200 Calls, => 6 Cust. (3%)	
	• Mass Email sales	10/2000 = **0.5%**	50,000 emails, => **70 Cust.** (0.14%)	

**To refines Approaches' Effectiveness: focusing on specific Segmentations
or using NEW Approaches e.g., Facebook, Line (=> TQA: Learning)**

Note: For Low Effectiveness Approach, doesn't mean we ignoring those approaches. To meet PURPOSE,

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IT IS ABOUT PURPOSE & CONTEXT

EFFECTIVENESS

Success Rate
95%
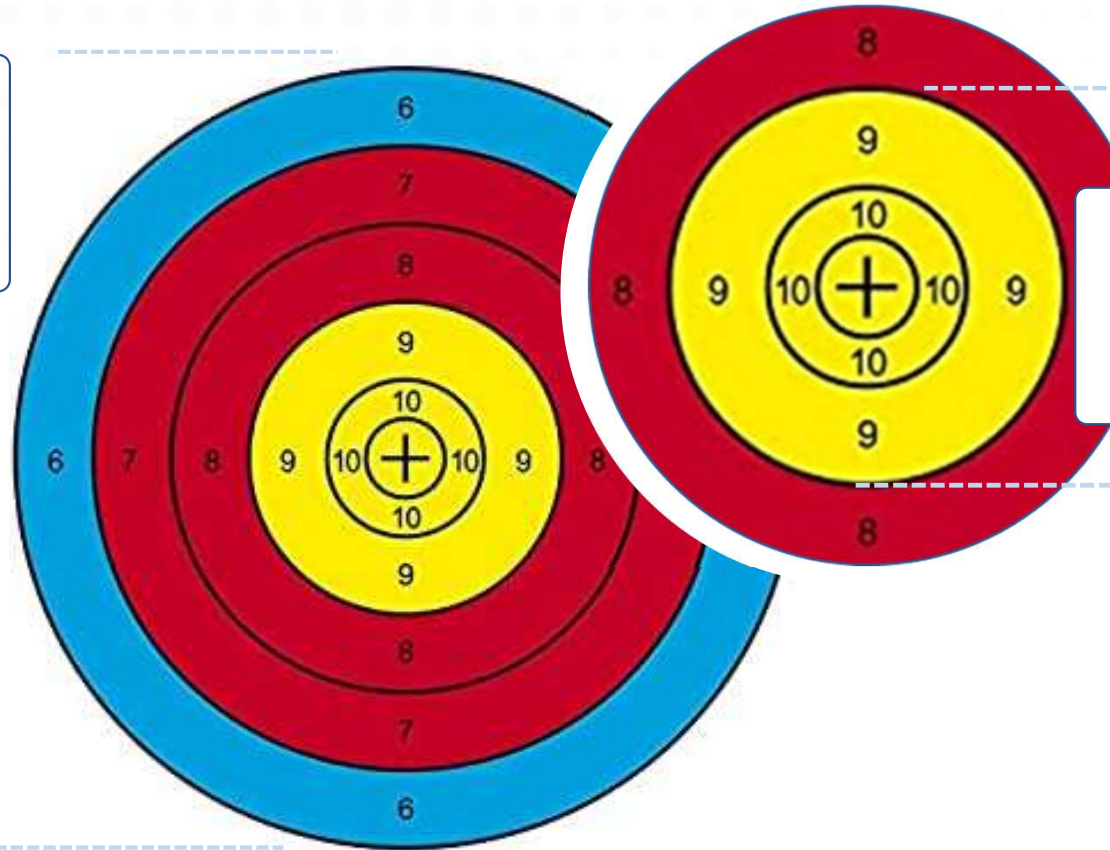
EFFECTIVENESS

Success Rate
5%

กำหนดตัวชี้วัดด้านประสิทธิภาพที่สอดคล้องกับผลลัพธ์ของกระบวนการ ตัวชี้วัดเหล่านี้จะได้รับการติดตามอย่าง ต่อเนื่องผ่านระบบทบทวนผลการดำเนินงานขององค์กร (ภาพที่ 4.1-2) ผ่านระบบ Smart Dashboard กระบวนการ เหล่านี้ได้รับการปรับปรุงและพัฒนาอย่างต่อเนื่อง <u>โดยใช้เครื่องมือที่หลากหลายและเหมาะสมกับกระบวนการ เช่น RCA, Lean, PDCA ทำให้สามารถป้องกันความผิดพลาดของกระบวนการต่าง ๆ ได้เป็นอย่างดี</u> การปรับปรุงและ พัฒนาอย่างต่อเนื่องนี้ ส่งผลให้คุณภาพของกระบวนการทำงานที่สำคัญเพิ่มขึ้นอย่างต่อเนื่อง เห็นได้จากการปรับปรุง ระบบการให้บริการดูแลนักศึกษาแบบ Customization ในปี พ.ศ. 2563 ความพึงพอใจต่อกระบวนการให้บริการ ต่าง ๆ ของมหาวิทยาลัยเพิ่มสูงขึ้นอย่างต่อเนื่อง (ภาพที่ 7.2-1)

คณะบริหารธุรกิจ National University of Thailand (NUT)   80

อาจสะท้อนแต่เป็นเรื่องของความเข้าใจในเครื่องมือ

5.2 ค(3) ประสิทธิผลของการเรียนรู้และการพัฒนา (Learning and Development Effective)

คกก.กำกับดูแลด้านนโยบายและประเมินการบริหารงานคณะฯ ประเมินประสิทธิผลและประสิทธิภาพของระบบการเรียนรู้และการพัฒนา โดยทุกปี เมื่อบุคลากรของคณะฯ เข้ารับการฝึกอบรมภายใน จะมีการประเมินความพึงพอใจ หัวข้อวิชาและวิทยากร โดยนำผลประเมินมาเป็นแนวทางในการพัฒนาหลักสูตร หัวข้อวิชาและวิทยากรสำหรับใช้ในการพัฒนา/ฝึกอบรมในรุ่นต่อไป ในปี พ.ศ. 2561 เริ่มใช้แนวทางการประเมินฯ ของ Kirkpatrick ซึ่งประกอบด้วย 4 ระดับ คือ 1) Reaction Evaluation 2) Knowledge Evaluation 3) Behavior Evaluation และ 4) Result/Evaluation and Follow up โดยหลักสูตรเกี่ยวกับการปฏิบัติงานประจำวัน และโปรแกรมคอมพิวเตอร์เพื่อการปฏิบัติงาน จะประเมินด้วยวิธี Reaction/ Knowledge Evaluation สำหรับหลักสูตรที่เกี่ยวกับการออกแบบและการทบทวนกระบวนการทำงาน การพัฒนางานวิจัย ระเบียบวิธีวิจัยและสถิติขั้นสูง เกณฑ์ AUN-QA การสอนตามระบบ UKPSF การวิจัยในมนุษย์ และหลักสูตรเทคโนโลยีและนวัตกรรมการเรียนการสอนสมัยใหม่ จะประเมินและติดตามผลหลังการฝึกอบรม (Behavior/ Result/ Follow up) ในปี พ.ศ. 2563 พบว่าการส่งบุคลากรไปอบรม ณ สถาบันฝึกอบรมภายนอกและหลักสูตรที่มีการอบรมโดยสถาบันต่างประเทศมีค่าใช้จ่ายสูง ซึ่งเดิมเป็นเพียงประเมินความพึงพอใจที่มีต่อหลักสูตรเท่านั้น ดังนั้น คกก.กำกับดูแลด้านนโยบายและประเมินการบริหารงานคณะฯ จึงประเมินความคุ้มค่าของการลงทุนในการฝึกอบรม (ROI in Training) ในหลักสูตรที่สำคัญโดยมีวัตถุประสงค์เพื่อให้ผู้เข้าอบรมได้นำ

National Performance Excellence (NPE): Operations by Design (Education)

4

Business Excellence

Foundation Perspective

Leadership
- Change Management
- Management by Objectives (OKR)
- Management Systems & KPIs

Business Strategy
- Vision, Mission & Values Success Model
- Focus Based Strategy

Customers
- Customer Driven Org.
- User Experience Based Products/Services

KM & IT
- Digitalization Org.
- KM & Innovation
- Learning Org.
- Data Governance

Workforce
- Culture of Excellence
- Workforce Engagement
- Productive Workplace

Org. Structure
- Governance Systems
- Agile Systems and Structure

Results
- **Finance, Research, and Academic Performance Growth**
- **Exceptional Student Value**
- **Stakeholder Satisfactions**

Operations Excellence

Drive Performance

Enablers Perspective

Operations Leadership
- Operations Performance Management
- Sustainable Development

Operations Strategy-1
- World Class Research
- Best-in-Class Teaching
- Co-operations & Alliances
- R2R

Operations Strategy-2
- Hybrid Classroom
- Lifelong Learning Course
- Digital Office

Operations KM&IT
- Data Governance
- PDPA & Cybersecurity

Operations Workforce
- High Performance
- Hybrid Workplace
- Flexible Workplan/Joint Appointment Program

Operations Org
- Process Thinking
- Capability Based Org.
- Agile or Cross Functional Team

Objectives
- **Adequate & Optimal Setting of Enablers**

- สิ่งที่ทำให้เกิดการเปลี่ยนแปลง (Enablers)

Operational Excellence

Process Perspective

Resources

Suppliers & Partners
- **Material & Information**
- **Staff & Know-how**
- **Assets & Energy**

Operational Process (Capability & Capacity)

Teaching	Research	Academic Services
IQA	Training	Student Services
Staff Serv.	Learning Support Service	

Results

Customers
- **Financial Performance**
- **Cost-effective Products & Services**
- **Customer-driven Quality**
- **Delivery Accuracy**
- **Capacity & Resource Utilization**

Support Perspective

Technology		Innovation
e-Learning	e-Academic System.	Hybrid-Classroom
e-QMS		Virtual Laboratory
e-Library		

Results
- **Support of Business & Operations**

Asst. Prof. Athisarn Wayuparb, Ph.D., CISA

CAPABILITIES

Example

Northwestern Business Capabilities FY20

STUDENT

Recruit		Support			Former Student	
Source Prospects	Convert Prospects	Student Life	Career Advancement	Student Finance	Alumni Transitions	Alumni Engagement

TEACHING & LEARNING

Curriculum		Teach			Learn	
Program & Degree Management	Degree Requirements	Course Delivery	Course Support	Evaluations	Advising	Learning Support

RESEARCH

Initiate		Conduct		Societal Impact	
Seek Funding	Research Setup	Execute Research	Track Research Data	Results Analysis	Publish & Share

EMPLOYMENT

Engagement		LifeCycle				Develop	
Attract & Select	Offer & Onboard	Benefits Management & Work/Life	Timekeeping & Payroll	Comp & Merit Planning	Workforce Management	Performance Management	Talent Development

FACULTY

Faculty LifeCycle		Faculty Data	
Recruitment & Retention	Promotion & Tenure	Internal	External

ORGANIZATION

University Outreach			Org Performance		Risk Management		
Brand Management	Community Engagement	Fundraising	Change Management	Program Review	Legal	Audit	Compliance

SERVICE

Financial Management				Campus Management				Information Management			
Budget & Planning	Procure to Pay	Investment Management	Financial Accounting	Space Planning & Management	Design & Build	Operate & Maintain	Safety & Security	Solution Management	Solution Delivery	Analysis & Reporting	Library Services

LEGEND
- STUDENT
- TEACHING & LEARNING
- RESEARCH
- EMPLOYMENT
- FACULTY
- ORGANIZATION
- SERVICE

Northwestern Administrative Systems Business Capabilities

Example

STUDENT

Recruit
Source Prospects	Convert Prospects
	CAESAR

Support
Student Life	Career Advancement	Student Finance
CAESAR		CAESAR ECATS NLA

Former Student
Alumni Transitions	Alumni Engagement
CAESAR CATracks Our Northwestern	Our Northwestern CATracks

TEACHING & LEARNING

Curriculum
Program & Degree Management	Degree Requirements

Teach
Course Delivery	Course Support	Evaluations

Learn
Advising	Learning Support
AdviseStream GSTS CAESAR	CAESAR GSTS URGP

RESEARCH

Initiate
Seek Funding	Research Setup
InfoEd	IRB IACUC NSIS, COI InfoEd

Conduct
Execute Research	Track Research Data
Vivarium Operations	Research Portal

Societal Impact
Results Analysis	Publish & Share
	NU Scholars Inteum

EMPLOYMENT

Engagement
Attract & Select	Offer & Onboard
FRS myHR	FRS myHR

LifeCycle
Benefits Management & Work/Life	Timekeeping & Payroll	Comp & Merit Planning	Workforce Management
myHR Benefit Focus	myHR Kronos	myHR	myHR

Develop
Performance Management	Talent Development
myHR Learn	myHR Learn

FACULTY

Faculty LifeCycle
Recruitment & Retention	Promotion & Tenure
FRS	

Faculty Data
Internal	External
	NU Scholars

ORGANIZATION

University Outreach
Brand Management	Community Engagement	Fundraising
		CATracks Our Northwestern

Org Performance
Change Management	Program Review

Risk Management
Legal	Audit	Compliance

SERVICE

Financial Management
Budget & Planning	Procure to Pay	Investment Management	Financial Accounting
NU Plans	NUFinancials iBuyNU		NUFinancials

Campus Management
Space Planning & Management	Design & Build	Operate & Maintain	Safety & Security
Facilities Connect	Facilities Connect	FAMIS	Police Blotter Identity & Access

Information Management
Solution Management	Solution Delivery	Analysis & Reporting	Library Services
Integration Solutions	NU Validate Document Mgmt Workflow	Cognos Power BI Tableau Research Portal	

LEGEND
- STUDENT
- TEACHING & LEARNING
- RESEARCH
- EMPLOYMENT
- FACULTY
- ORGANIZATION
- SERVICE

UNIVERSITY of WASHINGTON
Learning Capability Detail Matrix

Capabilities	Description	Supporting Human Resources	High-level processes	Supporting Technologies	Supporting Information	Operational Metrics	Organization
Admit	The Office of Admissions recruits new students, receives and evaluates transcripts and applications, and admits students to the University	•**Front Desk** •**Counselors** •**Specialists** •**File Builders** •**Graduate Student Readers** •**Processing Staff**	•**Receive Applications** •**Process Applications** •**Evaluate Applications** •**Review Applications** •Admit •Recruit •Advise	•**Student Information System** •Transfer Articulation via DARS •Recruitment Plus •**ApplyWeb/CollegeNetb** •MyUW •Admission Website •Docufide •CollegeBoard Search Service •Fire Engine Red •**NolijWeb**	•Equivalency Guide •**Paper and online application** •State and Federal legislation •**FERPA** •External market research data •Ad-hoc reports •**PESC Post Education Secondary Council**	•Application Counts •Offer rates •Enrollment Yields •Test Scores •High School and College GPA's •Assessment Scores •**Time to build, process, assess, and read files** •**Paper usage** •Prospect to Applicant Yield	•**Undergraduate Admissions Seattle/Bothell** •**Colleges and Departments** •Honors Program •Office Minority Affairs & Diversity •Undergraduate Advising at Gateway Center •**Registrar** •Residency Classification
Enroll	...	...	• ...	• ...	•...	•...	•...

W

OPERATING MODEL

Decision Making/Management by Objectives
(Information is USELESS, if it is not ACTIONABLE)

Process ▶ Performance

ค. การปรับปรุงผลการดำเนินการ

OVERALL: 1) Future Performance: **HOW** do you **PROJECT** your organization's **FUTURE PERFORMANCE**?
- How do you use findings from performance reviews and key comparative and competitive data in your projections?

2) Continuous Improvement and innovation: **HOW** do you **USE FINDINGS** from Performance reviews to develop priorities for **continuous improvement** and **opportunities for innovation**?
- How do you deploy these priorities and opportunities to ALL

  - to faculty, staff, other work group, and **FUNCTIONAL-LEVEL OPERATIONS**; and
  - *when appropriate*, to your feeder or receiving schools, suppliers, partners, and collaborators to ensure **ORGANIZATIONAL ALIGNMENT**?
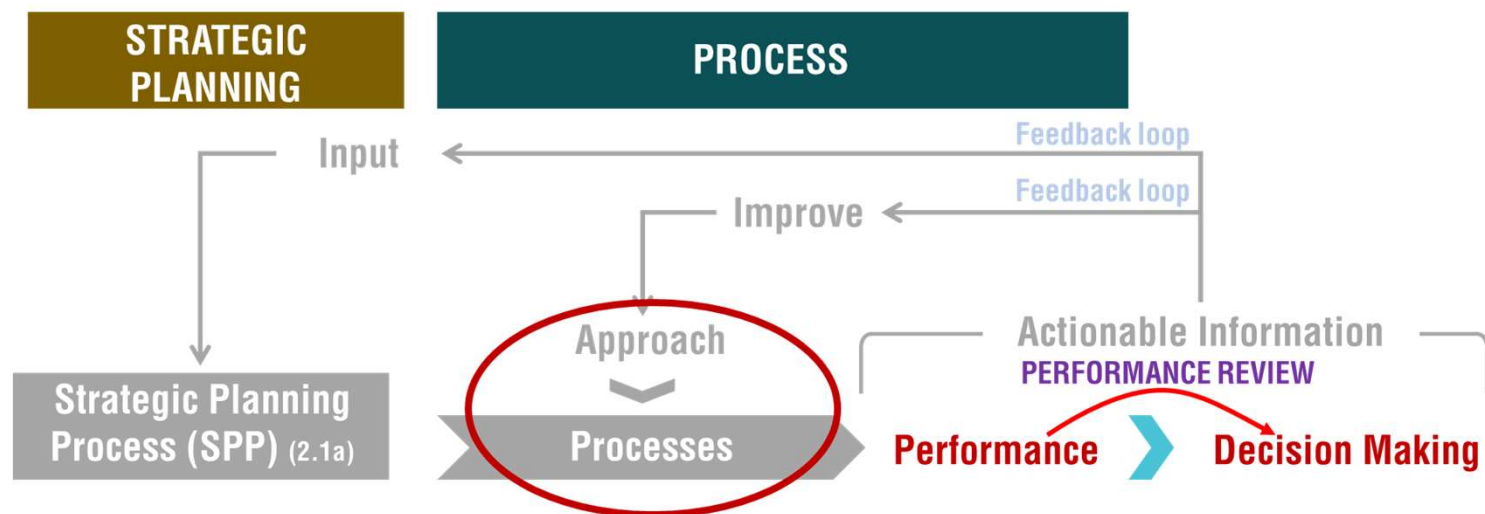
Performance Projections

IMPORTANT

PERFORMANCE PROJECTIONS. Estimates of your organization's future performance. Projections should be based on an understanding of past performance, rates of improvement, and assumptions about future internal changes and innovations, as well as assumptions about changes in the external environment that result in internal changes. Thus, performance projections can serve as a key tool in managing your operations and in developing and implementing your strategy.

Performance projections state your expected future performance. Goals state your desired future performance. Performance projections for your competitors or similar organizations may indicate challenges facing your organization and areas where breakthrough performance or innovation is needed. In areas where your organization intends to achieve breakthrough performance or innovation, your performance projections and your goals may overlap.

See also GOALS.

PERFORMANCE PROJECTIONS : การคาดการณ์ผลการดำเนินการ

"การคาดการณ์ผลการดำเนินการ" หมายถึง การคาดคะเนผลการดำเนินการในอนาคต **ของสถาบัน** การคาดการณ์ควรอยู่บนพื้นฐานของความเข้าใจในผลการดำเนินการที่ผ่านมา อัตราการปรับปรุง และสมมติฐานเกี่ยวกับการเปลี่ยนแปลงที่จะเกิดขึ้นภายในสถาบันและนวัตกรรมในอนาคต รวมถึงการเปลี่ยนแปลงภายนอกที่ส่งผลต่อการเปลี่ยนแปลงภายในสถาบัน ดังนั้นการคาดการณ์ผลการดำเนินการจึงเป็นเครื่องมือสำคัญที่ใช้จัดการการปฏิบัติการ การพัฒนาและการนำกลยุทธ์ไปปฏิบัติ

การคาดการณ์ผลการดำเนินการ เป็นการระบุถึงผลการดำเนินการที่ "คาดหวังในอนาคต" (expected future performance) ในขณะที่เป้าประสงค์เป็นการระบุถึงผลการดำเนินการที่ "ต้องการในอนาคต" (desired future performance) การคาดการณ์ผลการดำเนินการของสถาบันคู่แข่งหรือสถาบันที่คล้ายคลึงกัน อาจชี้ให้เห็นถึงความท้าทายที่สถาบันต้องเผชิญและเรื่องที่สถาบันจำเป็นต้องปรับปรุงแบบก้าวกระโดดหรือนวัตกรรม ซึ่งในกรณีดังกล่าวการคาดการณ์ผลการดำเนินการกับเป้าประสงค์อาจเหลื่อมซ้อนกัน

ดูคำจำกัดความของคำว่า **GOALS : เป้าประสงค์** ประกอบ ในหน้า 116

Performance Projection

Profit Growth
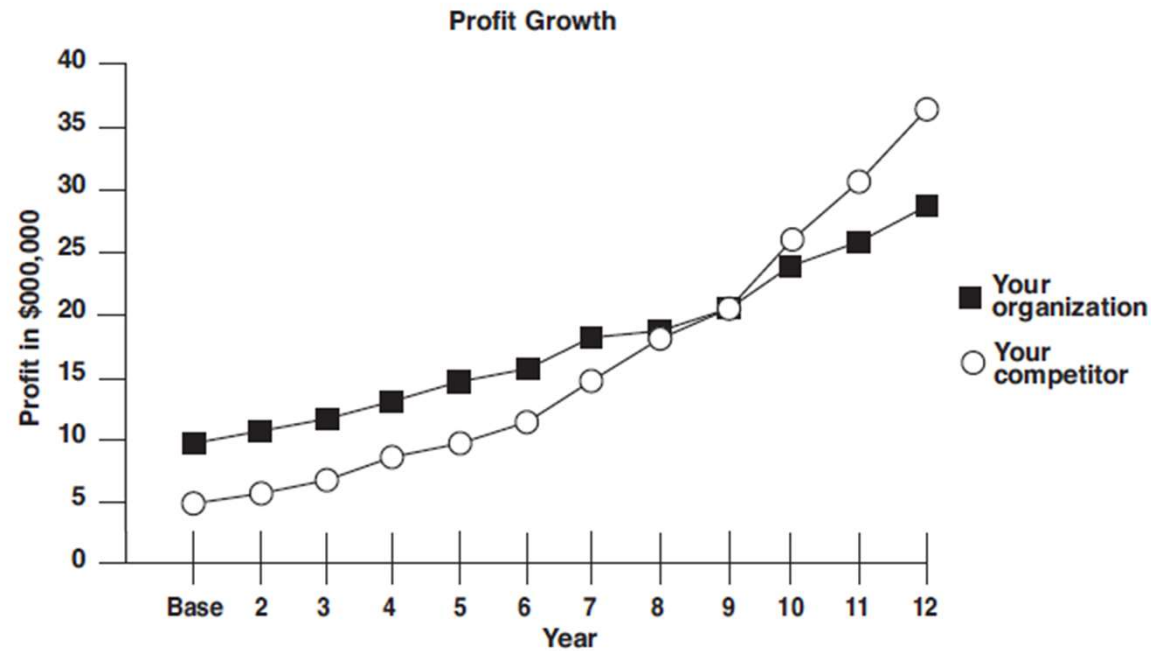
Figure 33 Projecting competitor's future performance.

Timetable is Basis of Projection
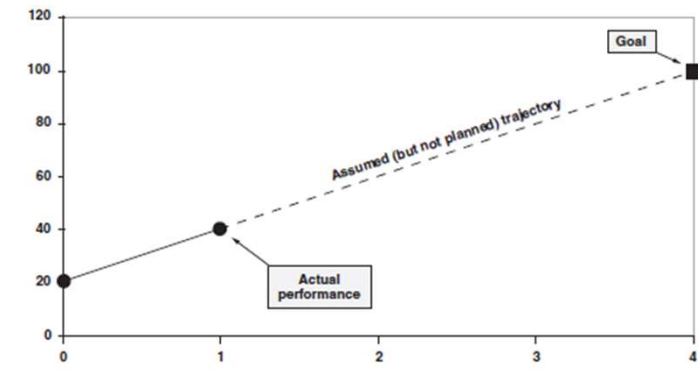
Figure 25 Assumed trajectory.
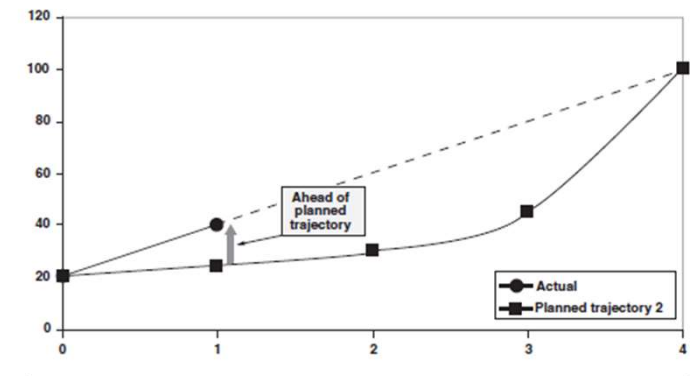
Figure 27 Planned trajectory 2—ahead of plan.

Mark Blazey, Insight to Performance Excellence 2019-2020

4.1b. Performance analysis includes examining performance trends; organizational, education sector, and technology projections; and comparisons, cause-effect relationships, and correlations. This analysis should support your performance reviews, help determine root causes, and help set priorities for resource use. Accordingly, such analysis draws on all types of data: student learning; student- and other customer-related; budgetary, financial, and market; operational; and competitive/comparative. The analysis should also draw on publicly mandated measures, when appropriate, and might also be informed by internal or external Baldrige assessments.

4.1b. Rapid response to changing organizational needs and challenges may include responding to the need for transformational change in your organizational structure and work systems.

For additional guidance on this item, see the Education Criteria Commentary (https://www.nist.gov/baldrige/baldrige-criteria -commentary-education).

- Performance trends;
- Organizational,
- Education sector, and
- Technology projections;
- Comparisons,
- Cause-effect relationships, and
- Correlations.

- determine root causes, and help
- set priorities for resource use

STRATEGY 2019 – 2025

END

Key Corporate Objective Areas

WAYs
Corporate Strategies

Big
Long
Strong

12 Corporate KPIs

Top Quartile xxx
Service Performance
by 2025

1	**Performance: Best-in-class operations**	Strong

- 1.1 **Logistics Service Excellence**
- 1.2
- 1.3
- 1.4

- **Logistics Service Excellence Score**

2	**Growth: Business Expansion and Sustainability**	Big

- 2.1 **Accelerate xxx Services for xxxx Products**
- 2.2
- 2.3
- 2.4 **Total Customer Engagement & Satisfaction**

Long

4	**Stakeholder excellence: Multi-stakeholder balance**	Long

- 4.1
- 4.2
- 4.3

Alignment & Integration จากVision, Mission สู่ แผนกลยุทธ์ และตัววัด

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ตารางที่ 3 แสดงตัวผลการดำเนินงานด้าน Performance: Best-in-Class

Corporate Strategy	CSF	Corporate Strategic Objectives	Corporate Strategic KPIs
P1: Logistics Service Excellence	P1.1: Perfect Order Completion	1. เป็นผู้ให้บริการโลจิสติกส์ที่สามารถตอบสนองต่อคำสั่งซื้อได้ครบถ้วนและตรงตามเวลาที่กำหนดได้มากกว่า 98%	DIFOT (%)
	P1.2: High Process Reliability	2. กระบวนการ....มีค่าประสิทธิภาพโดยรวมของเครื่องจักรไม่น้อยกว่า 85% ภายในปี 2023	Overall Equipment Effectiveness (%OEE)
	P1.3: Low Operating Cost	3. ต้นทุนรถขนส่ง xx บาท/ตัน-กิโลเมตร ภายในปี 2024	Cost per ton-km. (฿)

Corporate Objectives	Corporate KPI	Corporate Strategic KPI		Main Functional KPI
		DIFOT (%)	70%	OPD, TM, DF
	Logistics Service Excellence Score (Index)	Overall Equipment Effectiveness (%OEE)	15%	OPD
Performance:		Cost per ton-km. (฿)	15%	TM

Unit	Functional Objective	Functional KPI	Weight	Escalate to Corporate Strategic KPI	Weight
OPD	ดำเนินงานด้านปฏิบัติการในระบบโลจิสติกส์ ให้บรรลุตามแผนงานของหน่วยงานอย่างมีประสิทธิภาพและประสิท	SLA Committed (%)	10		
	ตอบสนองต่อคำสั่งซื้อได้ครบถ้วนและตรงตามเวลาที่กำหนดได้มากกว่า 98%	DIFOT (%)	40	DIFOT (%)	40
	กระบวนการ...มีค่าประสิทธิภาพโดยรวมของเครื่องจักรไม่น้อยกว่า 85%	Overall Equipment Effectiveness (%OEE)	20	Overall Equipment Effectiveness (%OEE)	100
	ไม่มีผู้ได้รับบาดเจ็บถึงขั้นหยุดงาน	Injury Frequency Rate (Index)	6	Injury Frequency Rate (Index)	50
	ไม่มีการละเมิดนโยบายความปลอดภัย	Safety Policy Violation (Index)	4	Safety Policy Violation (Index)	50
	นำเทคโนโลยีที่ทันสมัยมาใช้เพื่อเพิ่มประสิทธิภาพในการทำงาน	Violate Legal & Regulatory (#)	2	Violate Legal & Regulatory (#)	#
	สามารถรองรับการขยายงานตามแผนธุรกิจขององค์กร	Employee Competency Score (%)	8		
	ไม่มีการละเมิดต่อกฎหมายและกฎระเบียบ	SUCCESS' Behavior Score (%)	10		
	ระดับสมรรถนะของพนักงานในหน่วยงานเป็นไปตามเป้าหมายองค์กร				
	ระดับความสอดคล้องของพฤติกรรมพนักงานต่อวัฒนธรรมองค์กรในหน่วยงานเป็นไปตามเป้าหมายองค์กร				

KPI Documentation

this impacts future customer behaviour (purchases, recommendations, complaints etc.).

Strategic Objective	Maintain high levels of internal customer satisfaction		
Measurement focus	Satisfaction	**Measurement type**	Quantitative
Impact stage	Outcome	**Indicator focus**	Leading
Level	Strategic	**Presence at other levels**	Upstream

Data profile

Data capture period	Spot	**Standard reporting frequency**	Q
Automation fit	Not recommended	**Data integrity**	Medium
Limitations	It reflects only a level of general satisfaction, not areas in which dissatisfaction exists or causes for that. Measurement is based on internal customer surveys, thus being susceptible of inaccuracy due to subjectivity of respondents. This makes it also expensive.		

Targets

Target	80%	**Green threshold**	>80%
Benchmarking fit	Suitable	**Yellow threshold**	60-80%
Other intermediate targets	n/a	**Red threshold**	<60%

Measure administration

Measure owner (title)	HR Manager	Data custodian (title)	HR Analyst
Measure owner (name)	Firstname Lastname	Data custodian (name)	Firstname Lastname
Current status	Active	Activation date (past or future)	1/1/2009

Data gathering

Lead time	5 days		
Data source (DB name, System...)	Employee		
Who maintains DS	HR	When is data produced	End of quarter

Comments

Extended analysis of the surveys helps evaluate in what areas of service customers are not satisfied and what ideas for service improvement can be evidenced.

TO DRIVE & CASCADING PERFORMANCE

Strategic Business Objectives

| Cost Efficiency | Improve Competitiveness | Improve Org. Excellence | Lower Risk | Strengthening Growth |

Critical Success Factors

Strategic KPI

Excellence = Excellence in Practices

Tactical KPI

Operational KPI

Legend:
- Strategy-focused process
- Partner-focused process
- Customer-focused process
- Internal-focused process
- Product & Service-focused process
- Production-focused process
- Organization-focused process
- Human Resource-focused process
- Technology-focused process
- Governance-focused process
- Supplier-focused process
- Sustainability-focused process
- Finance-focused process
- Distribution-focused process

4.2 การจัดการสารสนเทศและการจัดการความรู้ (Information, and Knowledge Management): สถาบันมีวิธีการอย่างไรในการ**จัดการสารสนเทศ**และ**สินทรัพย์ทางความรู้** ของสถาบัน

BASIC

ก. ข้อมูลและสารสนเทศ (Data and Information)

1. คุณภาพ (Quality)
2. ความพร้อมใช้ (Availability)

ข. ความรู้ของสถาบัน (Organizational Knowledge)

1. การจัดการความรู้ (Knowledge Management)
   สถาบันมีวิธีการอย่างไรในการ**สร้าง**และ**จัดการการความรู้**ของสถาบัน

2. วิธีปฏิบัติที่เป็นเลิศ (Best Practices)
   สถาบันมีวิธีการอย่างไรในการ**แลกเปลี่ยนเรียนรู้วิธีปฏิบัติที่เป็นเลิศ**ในสถาบัน

3. การเรียนรู้ระดับสถาบัน (Organizational LEARNING)
   สถาบันใช้**ความรู้**และ**ทรัพยากร**อย่างไร **เพื่อให้การเรียนรู้ฝังลึกเข้าไปในวิธีการปฏิบัติงาน**ของสถาบัน

IMPORTANT

4.2   Information and Knowledge Management

Purpose

This item asks how you build and manage your organization's knowledge assets and ensure the quality and availability of data and information. The aim of this item is to improve organizational efficiency and effectiveness and stimulate innovation.

Commentary

Information management. Managing information can require a significant commitment of resources as the sources of data and information grow dramatically. The continued growth of information within organizations' operations—as part of organizational knowledge networks, through the web and social media, and in organization-to-organization and organization-to-customer communications—challenges organizations' ability to ensure reliability and availability in a user-friendly format. The ability to blend and correlate disparate types of data, such as video, text, and numbers, provides opportunities for a competitive advantage.

Data and information availability. Data and information are especially important in grade-to-grade, school-to-school, and school-to-work transitions and in partnerships with businesses, social services, and the community, and supply networks. You should take into account this use of data and information and recognize the need for rapid data validation, reliability assurance, and security, given the frequency and magnitude of electronic data transfer and the challenges of cybersecurity.

การจัดการสารสนเทศและการจัดการความรู้ (Information, and Knowledge Management): สถาบันมีวิธีการอย่างไรในการจัดการสารสนเทศและสินทรัพย์ทางความรู้ ของสถาบัน

BASIC

ก. ข้อมูลและสารสนเทศ (Data and Information)

1. คุณภาพ (Quality)
สถาบันมีวิธีการอย่างไรในการทวนสอบและทำให้มั่นใจว่าข้อมูลและสารสนเทศที่ใช้ในสถาบันมีคุณภาพ

- สถาบันมีวิธีการจัดการอย่างไรในการจัดการข้อมูลและสารสนเทศเชิงอิเล็กทรอนิกส์และในรูปแบบอื่น ๆ **เพื่อ**ให้มั่นใจว่ามีความแม่นยำ ถูกต้อง ความคงสภาพ (integrity) เชื่อถือได้และเป็นปัจจุบัน

2. ความพร้อมใช้ (Availability)
สถาบันทำให้มั่นใจได้อย่างไรว่าข้อมูลและสารสนเทศของสถาบันมีความพร้อมใช้

- สถาบันมีวิธีการอย่างไรเพื่อให้ข้อมูลและสารสนเทศที่จำเป็น **มีความพร้อมใช้**ในรูปแบบที่ใช้งานง่ายและทันการสำหรับ บุคลากร ผู้ส่งมอบ คู่ความร่วมมือที่เป็นทางการและไม่เป็นทางการ ผู้เรียนและลูกค้ากลุ่มอื่น
- สถาบันมีวิธีการอย่างไรในการ**ทำให้มั่นใจ**ว่าระบบเทคโนโลยีสารสนเทศของสถาบันเชื่อถือได้และใช้งานง่าย

Notes

4.2a(2). Information technology systems include, for example, physical devices and systems (hardware); software platforms and applications; and externally based information systems, such as those stored in the cloud or outside your organization's control.

4.2a(2). The security of your information technology systems is not addressed in this item. You should address this as part of your overall security and cybersecurity management in item 6.2.

หมายเหตุ

หมายเหตุ 4.2 ก (2) ตัวอย่างระบบเทคโนโลยีสารสนเทศ ได้แก่ ระบบและอุปกรณ์ต่าง ๆ (ฮาร์ดแวร์) ซอฟต์แวร์แพลตฟอร์ม (Software platforms) และแอปพลิเคชัน รวมถึงระบบสารสนเทศภายนอก เช่น ระบบที่จัดเก็บบนคลาวน์ (Cloud) หรือระบบอื่นที่นอกเหนือการควบคุมของสถาบัน

หมายเหตุ 4.2 ก (2) ความมั่นคงปลอดภัยของระบบเทคโนโลยีสารสนเทศของสถาบันไม่ได้อยู่ในเกณฑ์หัวข้อนี้ สถาบันควรตอบเรื่องนี้ ให้เป็นส่วนหนึ่งของการจัดการโดยรวมด้านความปลอดภัยและด้านการรักษาความปลอดภัยบนโลกไซเบอร์ในหัวข้อ 6.2
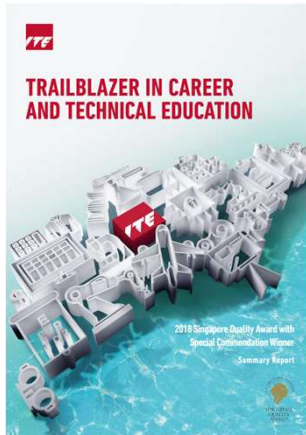
B Ensures the accuracy, accessibility and security of information

Structured Evaluation of Information and Knowledge Management

We have put in place a clear structure to evaluate and improve the management of information and knowledge, with reviews done by various committees, comprising both business and IT stakeholders, under the ITE Information and Knowledge Management and Review Structure, under the stewardship of CEO and the IT Steering Committee chaired by a Deputy CEO.

As part of IT governance, ITE is **fully compliant** with the strict requirements of the Government Instructional Manual (IM) 8. It covers domains, including data governance, architecture, protection, sharing and storage, and audit compliance. Our system security is further strengthened by our robust information systems and architecture, which leverage on state-of-the-art technology (see **Table 3**).
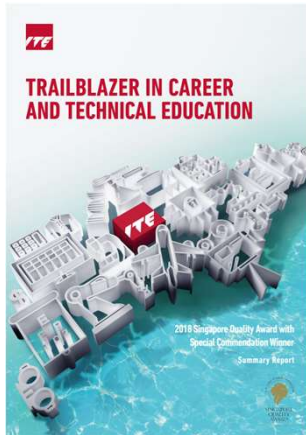
Table 3: Information Management

Requirement	Aspect	Measures
Reliability	Business Continuity	• Built-in contingency measures in case of disaster • Backup and Recovery Modules • No single point of failure for critical systems • Preventive measures identified and deployed • Disaster Recovery Exercises conducted
	Cyber Security	• Annual penetration testing for Internet-facing systems • Web Application Firewall • Cyber-Watch Centre • Distributed Denial of Service Mitigation • CAGE Vulnerability Scans • Defined Access Controls
	WOG Security Measures	• Network segregation to separate Government Network from Internet
Accessibility	Internal	• User access rights, with reviews of access • Remote access by secure VPN
	External	• ITE Website • E-Services • Social media
Accuracy		• Stringent acceptance tests by process owners • Performance/Load tests • Reliable primary source of data
Data Governance		• Compliance with Data Administration Group requirements • Compliance with IM8 • WOG Data Sharing (SG-DATA)
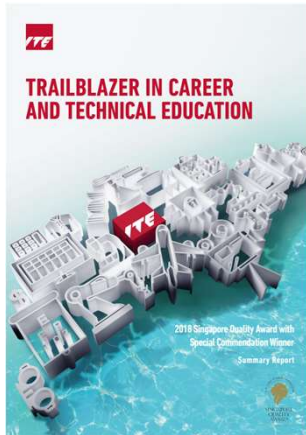
Assessment and Certification

Assessment is one of ITE's key processes as an education institution and training provider. ITE aims for zero error of the assessment and certification records entered in iStudent System to maintain the credibility of ITE's Certification System. We leverage on IT processes, for example, Distributed Optical Mark Reader (OMR) Scanning System (DOSS), online grade books, double mark entries for marks computation and entries to iStudent, to reduce the risk of human oversight and to uphold the accuracy of assessment records. Twice-yearly sample audits of the marking and mark entries at Colleges further ensure College users adopt good practices and high levels of vigilance in results processing. ITE College users have restricted access to records of their students within the window period for results processing. Subsequent to that, any data change requires approval from authorised personnel.

The introduction of the new **Integrated Assessment System** in 2018, with on-line examinations and on-screen marking, further enhances the assessment processes to safeguard the integrity and accuracy of assessment data.

Data Accuracy and Integrity

There are a few categories of **vendors in the Financial and Procurement (ACE) System**: Supplier, Government, Student and Staff. We minimise manual data entry in the ACE to ensure data accuracy. Thus, most details are interfaced in from other systems, where possible. For example, all staff data is interfaced from e-HCS, and supplier and government data is interfaced from GeBiz. Where manual data entry is required, there would be a second person to verify before confirming the data in ACE.

To ensure the **accuracy and integrity of staff data**, HR performs annual Job Data Verification Exercises to check for any potential job data anomalies, annual Headcount Verification Exercises to ensure there are no 'phantom' employees on our payroll, and Verification and Update of Personal Particulars and Reporting Structures to ensure that staff's personal data and reporting structure are up-to-date. These are conducted annually.

Information Dissemination

In terms of information accessibility and dissemination, ITE shares key information expeditiously with staff an[d] external stakeholders through an extensive range of IT-based and non IT-based platforms (see **Table 4** fo[r] examples on how specific information are made accessible via different dissemination channels).

Table 4: Information Dissemination Channels

Target Groups	IT-based Platforms	Social/Interactive Platforms
Internal (within ITE) (Staff & Unions)	• **Analytics** (Student Attendance and Enrolment Dashboard, Business Intelligence Reports, Assessment Management Data Mart and Automated Attendance Alert System) • **Knowledge Hub** (Establishment / Functional Information and Circulars / Manuals) • **MyHR Portal** (e-HCS) • **KRIS** • **Email System and Lotus Notes** • **InnovaTE, eTEAM and iCARE** • **ITE Website**	• **ITE and Establishment Work Plan Seminars** • **Management Communications Platforms**, including Staff Events, such as *ITE Care* Festival, ITE Innovation Fiesta, ITE ExCEL Convention and ITE Teachers' Day • **Dialogues with Unions** • **Focus Groups** (on new strategic initiatives) • **Staff Induction Programmes** • **Key Publications and Videos:** ITE Innovate and *ITE Trailblazer* Brochures, ITE Service Handbook and annual ITE Corporate Highlights • **Posters on key OE Policies**
External (Customers, Stakeholders, Partners & Suppliers and Public)	• **iStudent** • **iDe'Lite** Videos • **ITE Website** • **Social Media** (Facebook, Twitter, Instagram)	• **ITE Prospectus and Publications** (eg. infinITE, IgnITE and Annual Report) • **Dialogues with Students and Staff** (by Chairman, CEO and Senior Leaders) • **Experience ITE Programme** (for Sec School Students) • **School Networking Activities, Open Houses & Talks** • **Media Publicity** • **Industry Partnership Forums** • **Sharing with Visitors to ITE and Foreign Partners Overseas**

4.2 การจัดการสารสนเทศและการจัดการความรู้ (Information, and Knowledge Management): สถาบันมีวิธีการอย่างไรในการจัดการสารสนเทศและสินทรัพย์ทางความรู้ ของสถาบัน

BASIC

ข. ความรู้ของสถาบัน (Organizational Knowledge)

1. การจัดการความรู้ (Knowledge Management)
สถาบันมีวิธีการอย่างไรในการสร้างและจัดการการความรู้ของสถาบัน

- สถาบันมีวิธีการอย่างไรในการ
    - รวบรวมและถ่ายทอดความรู้ของบุคลากร (Link OP)
    - ผสานและเชื่อมความสัมพันธ์ของข้อมูลจากแหล่งต่าง ๆ **เพื่อ**สร้างองค์ความรู้ใหม่
    - ถ่ายทอดความรู้ที่เป็นประโยชน์ระหว่างสถาบันกับผู้เรียน ลูกค้ากลุ่มอื่น ๆ ผู้ส่งมอบคู่ความร่วมมือ ทั้งที่เป็นทางการและไม่เป็นทางการ (Link OP)
    - รวบรวมความรู้และถ่ายทอดความรู้ที่เป็นประโยชน์**ไปใช้ใน**การสร้างนวัตกรรมและในกระบวนการวางแผนเชิงกลยุทธ์ (Link 2.1ก2)

Knowledge Management

A key component under our Integrated Information and Knowledge System to promote open culture of learning and sharing is our **Knowledge Management (KM) Portal** (see **Figure 3.4**), which captures tacit insights and experiences. Our KM Portal comprises **6 Knowledge Bases (KBs)** [viz, **(1) Corporate (2) Curriculum Development (3) Customers & Partners (4) Innovation & Technology (5) Student Management** and **(6) Teaching Effectiveness**]. The KBs provide critical inputs for value creation and business improvements to the key processes under the ITE Value Creation and Business Models (see **Category 5 – Processes**).

Figure 3.4: ITE KM Portal

4.2 การจัดการสารสนเทศและการจัดการความรู้ (Information, and Knowledge Management): สถาบันมีวิธีการอย่างไรในการ**จัดการสารสนเทศ**และ**สินทรัพย์ทางความรู้** ของสถาบัน

BASIC

ข. ความรู้ของสถาบัน (Organizational Knowledge)

2. วิธีปฏิบัติที่เป็นเลิศ (Best Practices)

สถาบันมีวิธีการอย่างไรในการแลกเปลี่ยนเรียนรู้วิธีปฏิบัติที่เป็นเลิศในสถาบัน

- สถาบันมีวิธีการอย่างไรในการค้นหาหน่วยงานหรือการปฏิบัติการ ทั้งภายในและภายนอกสถาบัน ที่มีผลการดำเนินงานที่โดดเด่น สถาบันมีวิธีการอย่างไรในการค้นหาวิธีปฏิบัติที่เป็นเลิศเพื่อการแลกเปลี่ยนเรียนรู้และนำไปปฏิบัติทั่วทั้งสถาบัน

หมายเหตุ ข (1) การผสานและเชื่อมความสัมพันธ์ของข้อมูลจากแหล่งต่าง ๆ อาจเกี่ยวกับชุดข้อมูลขนาดใหญ่ และประเภทของข้อมูลสารสนเทศที่แตกต่างกัน เช่น ตารางข้อมูล วีดิทัศน์ และข้อความอาจเกี่ยวข้องกับการวิเคราะห์ข้อมูล (Data analytics) และเทคนิควิทยาการข้อมูล (Data science) นอกจากนี้ ความรู้ของสถาบันที่สร้างจากข้อมูลเหล่านี้ อาจเป็นเพียงการประมวลข้อคิดเห็นและอาจเปิดเผยสารสนเทศที่อ่อนไหวเกี่ยวกับสถาบัน หรือรายบุคคล ที่จำเป็นต้องได้รับการปกป้องจากการนำไปใช้เพื่อวัตถุประสงค์อื่น

หมายเหตุ 4.2 ข (3) การปลูกฝังการเรียนรู้ลงไปในวิถีการปฏิบัติงานของสถาบัน หมายความว่าการเรียนรู้ควรเป็น

1) ส่วนหนึ่งของการปฏิบัติงานประจำวัน
2) เรื่องที่มีผลต่อการแก้ปัญหาที่ต้นเหตุโดยตรง
3) การมุ่งเน้นการสร้างองค์ความรู้และแบ่งปันความรู้ทั่วทั้งสถาบัน
4) เรื่องที่เกิดจากการมองเห็นโอกาสการเปลี่ยนแปลงที่สำคัญและมีนัย รวมทั้งการสร้างนวัตกรรม

Criteria Commentary

Knowledge management. The focus of your knowledge management is on the knowledge that your people need to do their work; improve processes, programs, and services; and innovate to add value for students, other customers, and your organization.

Your organization's knowledge management system should provide the mechanism for sharing your people's and your organization's knowledge to ensure that high performance is maintained through transitions. You should determine what knowledge is critical for your operations and then implement systematic processes for sharing this information. This is particularly important for implicit knowledge (i.e., knowledge personally retained by workforce members)

Organizational learning. One of the many issues facing organizations today is how to manage, use, evaluate, and share their ever-increasing organizational knowledge. Leading organizations benefit from the knowledge assets of their workforce, students, other customers, suppliers, collaborators, and partners, who together drive organizational learning and innovation.

Knowledge Asset

สินทรัพย์ทางความรู้ (Knowledge Assets) หมายถึง

    ทรัพยากรทางปัญญาที่สถาบันสั่งสมมา   เป็นองค์ความรู้ของทั้งสถาบันและผู้ปฏิบัติงานในรูปแบบของสารสนเทศ แนวความคิด การเรียนรู้ ความเข้าใจ ความทรงจำ ความเข้าใจอย่างลึกซึ้ง ทักษะทางปัญญาและทางเทคนิค รวมทั้งขีดความสามารถต่าง ๆ สินทรัพย์ทางความรู้ของสถาบัน มีอยู่ในผู้ปฏิบัติงาน หลักสูตร ซอฟต์แวร์ ฐานข้อมูล เอกสาร แนวทางปฏิบัติ นโยบาย และระเบียบปฏิบัติ สินทรัพย์ทางความรู้ยังอยู่ที่ผู้เรียน ลูกค้ากลุ่มอื่น ผู้ส่งมอบ และคู่ความร่วมมือที่เป็นทางการด้วย

    สินทรัพย์ทางความรู้เป็น   "ความรู้ความชำนาญ" (Know-how)   ที่สถาบันมีอยู่และสามารถนำไปใช้ประโยชน์   เพื่อเพิ่มพูนและพัฒนาสถาบันให้เติบโต   การเสริมสร้างและการจัดการสินทรัพย์ทางความรู้จึงเป็นส่วนประกอบที่สำคัญสำหรับสถาบันในการสร้างคุณค่าให้แก่ผู้มีส่วนได้ส่วนเสีย   ทั้งยังช่วยธำรงความสำเร็จของสถาบันให้ยั่งยืน

KNOWLEDGE ASSETS. Your organization's accumulated intellectual resources; the knowledge possessed by your organization and its workforce in the form of information, ideas, learning, understanding, memory, insights, cognitive and technical skills, and capabilities. These knowledge assets reside in your workforce, curricula, software, databases, documents, guides, and policies and procedures. Knowledge assets also reside within students, other customers, suppliers, and partners.

Knowledge assets are the know-how that your organization has available to use, invest, and grow. Building and managing knowledge assets are key components of creating value for your stakeholders and sustaining organizational success.
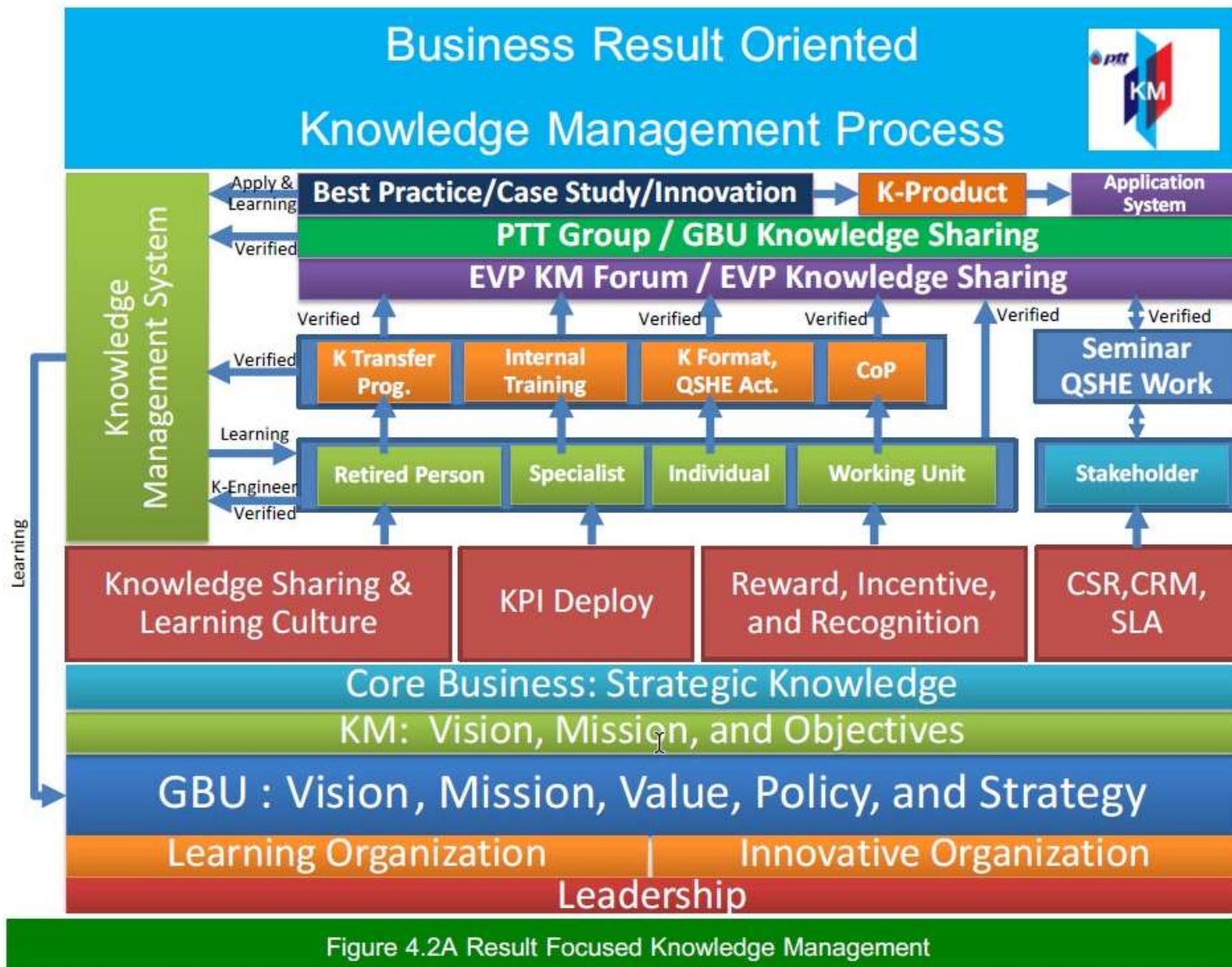
Figure 4.2A Result Focused Knowledge Management

Figure 4.2-1 Collaboration and Knowledge Management System (CKMS)				
SH	**CKMS Method**	**Frequency**	**Participants**	**Integration Points**
Students and Parents	Pathways Personalized Education Planning (PPEP)	Daily	Student, Parents, Teacher, Counselor, Lead, and Pathways Specialist	CC, VMV, SI, VOC
	Student/Parent Online Portal	Daily	Student, Parent, and Teacher	CC, SI
	Student/Parent Survey (Satisfaction Survey/Graduate Survey/Redirection Survey)	Annually, Ongoing	Student, Parent, Teacher, Lead, LT	CC, VMV, SI, VOC
	Resource Center Open House	Annually	Students, Parents, Community Members, Teachers, Leads, Counselors, SL	CC, VMV, SI, VOC
	Senior Night/Senior Exit Orientation	Annually	Seniors, Parents, Counselors, Teachers, Leads, Counselors, SL	CC, VMV, SI, VOC
	English Learner Advisory Committee (ELAC)	Annually	Curr & PD Coordinator, Special Instructional Services Coordinator, and Parent representatives	CC, VMV, SI, VOC

Figure 4.2-1 Collaboration and Knowledge Management System (CKMS)

SH	CKMS Method	Frequency	Participants	Integration Points
Workforce	Workforce Surveys (Satisfaction/Ethics/Meeting/PD Evaluations/As Needed)	Annually	All Workforce Members (Instruction, Support Staff, LT)	CC, VMV, SI, VOC
	Altus University (Full Offerings AOS)	Daily	All Workforce, Visiting/Guest Speakers ,and Trainers	CC, VMV, SI, VOC
	Altus Pathways Advisory Council (APAC) Meeting	Monthly	Curriculum & Professional Development Coordinator, Pathways Department Lead, Curriculum Lead, NWEA MAP Lead, School Pathways Lead, Naviance Lead	CC, VMV, SI, VOC
	Curriculum Department Meetings	Monthly	Teachers assigned to subject-area department based on expertise and request	CC, VMV, SI, VOC
	Faculty Meetings	Quarterly	Instructional Staff and LT	CC, VMV, SI, VOC
	Instructional/Lead Meetings	Every 2 months	Instructional Staff, Leads and LT	CC, VMV, SI, VOC
	Resource Center Associate (RCA) Training	Every 2 months	RCAs and Teacher Leader	CC, VMV, SI, VOC
	Resource Center Meetings	Monthly	Teachers, Resource Center Associates, Learning Lead, Counselor	CC, VMV, SI, VOC
	Lead Meeting	Monthly	School Coordinator and Learning Leads (4)	CC, VMV, SI, VOC
	Office Meetings	Quarterly	Support Staff and LT	CC, VMV, SI, VOC
	Leadership Team Meeting (SPP/SI Review)	Quarterly	Leadership Team	CC, VMV, SI, VOC
	Strategic Sustainability Meetings	Monthly	SL, LT, Head Counselor, Data Analyst	CC, VMV, SI, VOC
	Workforce Leader Support Training and Special Projects	As needed	Members selected based on their leadership interest, potential for Best Practice Sharing in specific areas	CC, VMV, SI, VOC
	Capability and Capacity Assessments	Weekly, Monthly, Annually	OHRA, School Coordinator, LT Members, as needed	CC, VMV, SI, VOC
	Individual Workforce Member Meetings	As needed	Workforce member and LT	CC, VMV, SI
	Executive Safety Committee	Quarterly	DII, OHRA, School Nurse, Administrative Associate	CC, VMV, SI, VOC

	Figure 4.2-1 Collaboration and Knowledge Management System (CKMS)			
SH	**CKMS Method**	**Frequency**	**Participants**	**Integration Points**
Other Stakeholders	Board of Directors (BOD)	Quarterly	BOD Members, Community, Parent, Business Representatives, SL	CC, VMV, SI , VOC
	CEO Council (BOD, Community, Suppliers, Partners, Collaborators)	Annually, As Needed	Local Business leaders	CC, VMV, SI , VOC
	Community Support and Influence (Community, Partners, Collaborators, Partner Schools)	Monthly	SL and LT Members as appropriate	CC, VMV, SI , VOC
	Community Collaborator Partnerships	As needed	Partnership and Development Coordinator, targeted community organizations that support student and school	CC, VMV, SI , VOC
	Supplier Process Review	Quarterly, Annually	CFO, LT Member as appropriate	CC, VMV, SI , VOC
	Counselor Visits (Partner Schools)	Quarterly	Lead, Counselor	CC, VMV, SI, VOC
	SL Communication Plan (see chart)	Ongoing	SL	CC, VMV, SI, VOC

SH: Stakeholder, CC: Core Competency, VMV: Vision, Mission, Values, SI: Strategic Initiatives, VOC: Voice of Customer/Data

Objective	Methods
Collect and Transfer Workforce Knowledge	Work process documentation
	Exit interviews
	Town Hall meetings
	Suggestions to committees/councils/teams
	PACE Survey and focus groups
	Point of Contact Service Satisfaction Surveys
	E-mail
	Team to Team sharing
	Team reporting
	Presentation of team learning or design
	ACD Procedures Manual
	AlamoShare
	Banner
Blend and Correlate Data to Build New Knowledge	Environmental scan process
	SWOT Analysis process
	VOC System
	Cross-functional collaboration
	Cross-College Councils
	Organizational performance reviews
	Action Plan Development and Implementation
	4DX Summits
	Tableau Data Analysis System

Transfer Knowledge from & to Students, Other Customers	Admissions process
	Advisors
	Staff interaction with student
	Student Satisfaction Survey
	Brochures
	Social Media – Website, Facebook, Twitter, Instagram, YouTube
	Learning and Development Initiatives
	AlamoShare
	Banner
	Mobile Apps
Transfer Knowledge from & to Suppliers, Partners, Collaborators	Negotiations, written agreements, contracts
	Meetings and phone conversations
	Training
	Feedback and post-mortem sessions
	E-mail
	Website
Knowledge for Innovation and Strategic Planning	Environmental Scan process
	SWOT Analysis process
	Voice of the Customer process
	KPI process
	RIP
	PDM and FOCUS PDCA processes
	Tableau Data Analysis System

Figure 4.2-2 Knowledge Management Methods

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Core Competency/ Core Process	COP	PTT Group Functional Excellence/ Result
Operation Excellence	• NG-INPLANT Service • NG-Retail-Delivery • GSP • Turnaround	Operation Excellence
Supply Chain Management	• Energy Act • Catching up with the global gas dynamic • Pricing • Strategic in Harmony	Corporate Strategy
Value Added	• Business Development • Business Innovation • Sale and Marketing • NG-Sales • Digital Working Team	• Sale and Marketing/ Stakeholder Management • New Business

Figure 4.2B GBU Knowledge Map with Core Competency and Core Process

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Fig. 4.2-3 Knowledge Management Approaches

AREA	KNOWLEDGE MANAGEMENT APPROACHES
Collect/ transfer workforce knowledge	• Rounding • Satisfaction surveys • Policies and procedures • Training/cross training/required annual education • Orientation • Department meetings • Weekly Huddles • Top 5 Dashboards • Performance reviews • Intranet • Skills Fairs • Competencies through Healthstream • Time clock messaging • Unit newsletters • Break room and associate restroom posters
Blend and Correlate Data	• Strategic Planning SWOT Analysis • Governing Board Quality Report • Pillar Performance Analysis at CLI's, Leadership Meetings, and LEM 90-day action plans • QIT reports to the QIC
Transfer knowledge to / from stakeholders	Patient/Family Knowledge: • Rounding • White boards in patients' rooms • Satisfaction surveys • Complaint/compliment process • Patient Promise posters in each room • Banners in units that achieve top-decile performance, COE and other achievements Community Knowledge: • Publicly published data • Annual Quality Report Supplier/Partner/Collaborator Knowledge: • Contracts, contract review and performance evaluation • e-mail/phone updates • Vendor orientation

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Figure 4.2-2 Knowledge Management System

Knowledge Used By and For	Collection Methods: Communication (1.1-2) Voice of Customer (3.1-2)	Mechanisms for Deployment	Organizational Learning and Use of Knowledge	Evaluation / Measures
Workforce	• Employee Survey • Employee Visits • Handbook • Employee Orientation	• Annual Survey • Monthly VP • Monthly Visits • SharePoint Postings • Semi-annual Meetings	• Workforce Engagement • Performance Evaluations • Company Meetings • Dream Job Status	• Engagement • Compliance
Customers	• Customer Survey • SLT Visits • Listening Methods	• Annual Survey • Monthly Visits • Conferences	• Satisfaction Metric • Marketplace Data • Customer Critical Needs	• Engagement • Metrics
Situational Awareness	• Listening Methods • Visits • Email	• Interactions • One Pagers	• Customer Critical Needs	• Visits • Interactions
Training / Crossing the Boundaries	• Employee Communication	• Email • Semi-annual SharePoint Posting	• Current Skill Set • Industry Needs	• Number of Hours • Number of Emails
Strategic Planning	• Internal Data • External Data	• Annual Meetings • Company Meetings	• Planned Growth and Development	• Convergence Data • Critical Process Meeting Data

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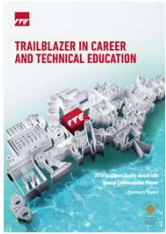
Knowledge Management

ITE *systematically collects* *macro-level information from key government agencies and bodies, including NMC, MOE, MOM, EDB and SkillsFuture Singapore*, **for planning and policy formulation**. We also gather knowledge and information from industry and trade associations, school and international partners, staff, unions, students and alumni, as well as other relevant internal and external sources, **in support of Skilling the Future of Singapore**. The information is **then carefully analysed for the development and review of plans, policies, strategies and programmes essential to ITE's core business needs**.

This helps ITE make forward-looking and timely decisions in planning and performance improvement. Figure 1 provides an overview of our **Integrated Knowledge Management for Organizational Planning and Review.**

Figure 1: Knowledge Management for Organisational Planning and Review
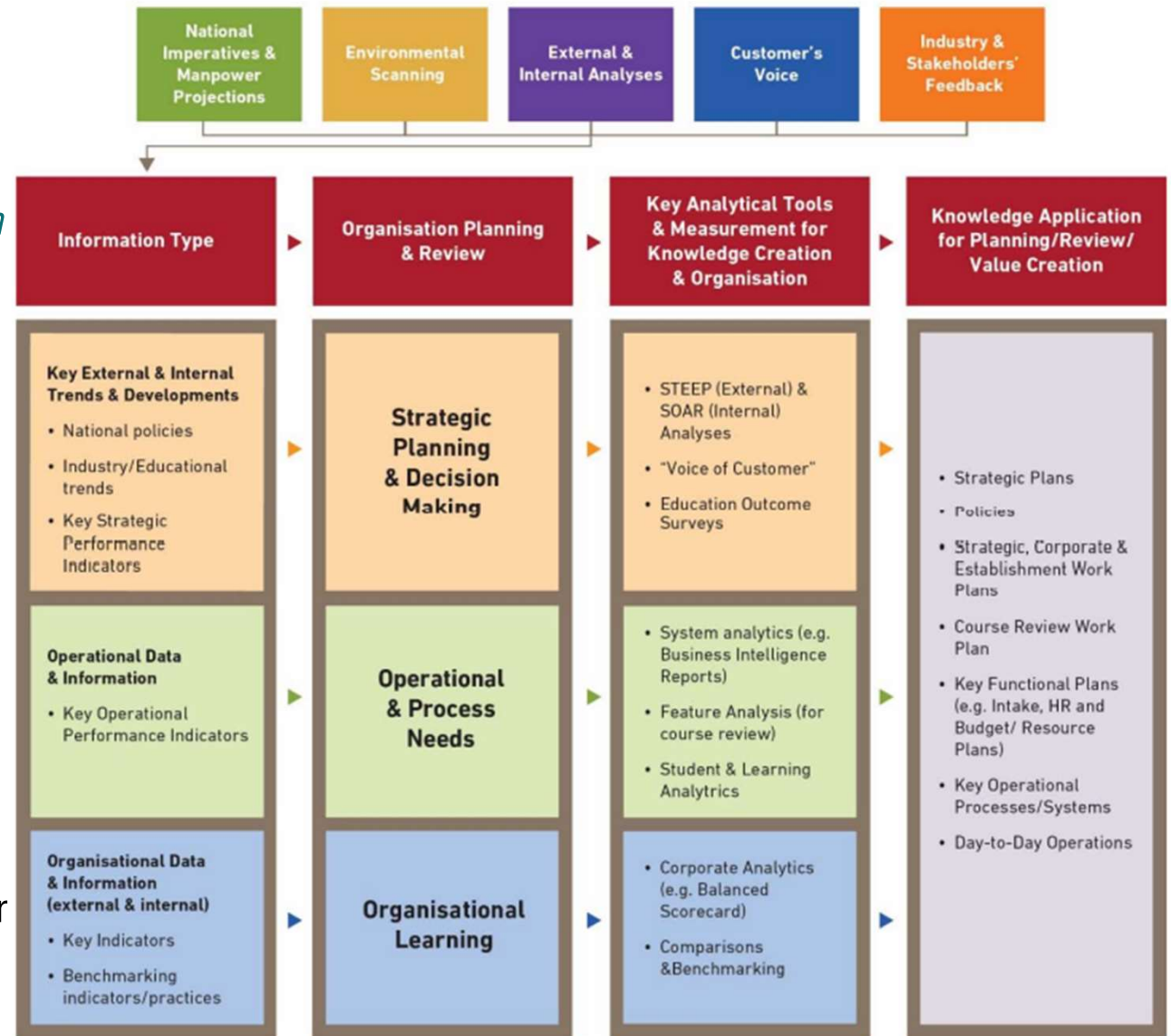
REFORMS IN CURRICULUM AND PEDAGOGY

The ITE Curriculum and Pedagogic Models underwent major revamps in the late 1990s, culminating in the introduction of a new ITE Curriculum Model and an ITE Pedagogic Model called the PEPP (Plan, Explore, Practice and Perform) Model in year 2000.

As a Pedagogic Model, PEPP was very relevant to the acquisition of career and technical skills. It is systematic and process based. Our concept was that if every ITE student was put through the process-based learning several times during his two years with ITE, he would become familiar with the process of planning, exploring, practising and performing in learning new skills and in solving new problems. This teaching process would therefore enable ITE students to acquire 'learning to learn' skills. The main driving force for the revamp was to address the shift towards a knowledge-based globalised economy and the pervasive use of IT in our daily life and workplace.

We recognised that technical skills have to remain as the core competencies of ITE graduates, but the softer Life Skills (we called these Employability Skills then), such as communication, thinking and problem solving, would be just as important for ITE graduates to function effectively in an increasingly more knowledge-based workplace. In addition, we also felt that our students should be given the opportunity to explore beyond their specific disciplines, to allow them to broaden their scope of study and make learning in ITE more interesting and challenging.

TAN HONG CHOON
RETIRED AS PRINCIPAL,
ITE COLLEGE WEST IN 2005

1990s

- New ITE Curriculum Model and
- ITE Pedagogic Model

PEPP

| Plan | Explore | Practice | Perform |

A HOLISTIC *HANDS-ON, MINDS-ON, HEARTS-ON* ITE EDUCATION

ITE 2000 first introduced a Total Training Philosophy. The moulding of ITE students into all-rounded individuals through the Total Training Philosophy was a continual process that finally created that unique brand of ITE education. ***ITE Advantage*** aimed to make students' learning holistic through the ***Hands-on, Minds-on, Hearts-on*** education philosophy, supported by a vibrant and conducive learning environment. This allows students a new approach — to integrate theory with practice through coursework, industry exposure, projects and experiential learning.

Hands-on training will equip ITE students with the skills-set required on the job, while ***Minds-on*** learning will develop them into thinking and flexible practitioners, who are able to keep learning and adapting to changes in the environment. ***Hearts-on*** learning will develop 'complete' ITE students who care for the community and society. The whole objective is to prepare students of different abilities, talents and interests for the new challenges and requirements of the global market, and train them to become market-relevant, adaptable, enterprising and compassionate.

A BREAKTHROUGH CURRICULUM MODEL

The **ITE Breakthrough** introduced a new Curriculum Model in 2000, which placed a high emphasis on the learning of practical skills, in line with the strengths of ITE students. Though the emphasis is on 'hands-on' learning, students are also taught the related underpinning theoretical knowledge. Elective modules, intended to broaden or deepen a student's knowledge in various subject areas, gave students a choice related to their area of training or personal interest.

Foundational generic modules, called 'Lifeskills', were introduced to provide students with the necessary personal qualities they need to succeed at the workplace. Such soft skills are taught over and above those infused into the core curriculum.

Hands-on, Minds-on, Hearts-on education epitomised by the passion and care in the Pastry & Baking course under the School of Hospitality.

A STUDENT-CENTRIC PEDAGOGIC MODEL

Under *ITE Breakthrough*, a new Pedagogic Model was also introduced, with the primary aim of nurturing ITE students into graduates who are more than just technologically-savvy and adaptable, but creative and globally competitive, too. Implemented for all full-time courses since July 2000, the model has paved the way for more dynamic methodologies of teaching and learning.

With the new Pedagogic Model, students take on a much more proactive role — planning their learning process and exploring all available resources, while teachers, being facilitators, coach from the sidelines. Students can look towards having a sturdier learning foundation through such an active and collaborative learning environment. By implementing a Key Competencies Model to strengthen students' Technical, Methodological and Social skills, VTE was redefined and students were prepared for life-long learning and success.

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RIGOROUS PLANNING AND VALIDATION OF ITE CURRICULUM

The planning of ITE curriculum is a well-established world-benchmarked process that is rigorous and consultative, taking in inputs from all levels of industry and pertinent stakeholders to ensure robust and relevant curricula. ITE forms extensive partnerships and collaborations with key industry players and taps on their expertise, to develop skills standards and curriculum. Doing so ensures that the courses remain relevant and responsive to the needs of industry. Through the internationally-recognised DACUM (Developing A Curriculum) process, ITE ensures that its graduates are equipped with the right skills for the job.

ITE also has a rigorous and well-established system to validate each course syllabus. Academic Advisory Committees (AACs) examine and approve syllabi of courses for the respective industries or occupational clusters. The AACs meet regularly to discuss and review the syllabi, provide feedback on changes in industry, as well as provide specialist advice on technological trends. Each AAC comprises employer representatives, professionals and specialists from the respective industries. The AACs represent a vast resource of expertise, knowledge and experience to help ITE stay relevant, responsive and, if possible, anticipative of the changing needs of industry, society and the community.

The revamped Precision Engineering courses served as an excellent example of how ITE's regular stocktake of developments in industry and review of existing Physical Education curriculum ensured that ITE courses are not only relevant, but address the emerging and advanced skills required by various industry sectors. In January 2009, ITE implemented four entirely new courses related to the field. The new full-time courses were: *Nitec* in Aerospace Machining Technology, *Nitec* in Machine Building Technology, *Nitec* in Medical Manufacturing Technology and *Nitec* in Semiconductor Tooling Technology. In addition to being equipped with stronger niche competencies and precision skills, ITE students will be exposed to high-value manufacturing skills through industry attachment in these industries.

Input on manpower needs and curriculum design from industry helped ITE reinvent courses offered under Precision Engineering and offer training in niche areas with higher value-add, like Aerospace Machining Technology, Machine Building Technology, Medical Manufacturing Technology and Semiconductor Tooling Technology.

จงตั้งเป้าหมาย ตั้งจาก **โอกาส** อย่าตั้งจาก~~ปัญหา~~

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