

# Continuous Improvement (CIP)

## All About

Amin Kaboli

Week 1, Session 1, Feb 21<sup>st</sup>, 2025

# CIP Team – Penguin Team

## Coaches

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Gaetan



Jack

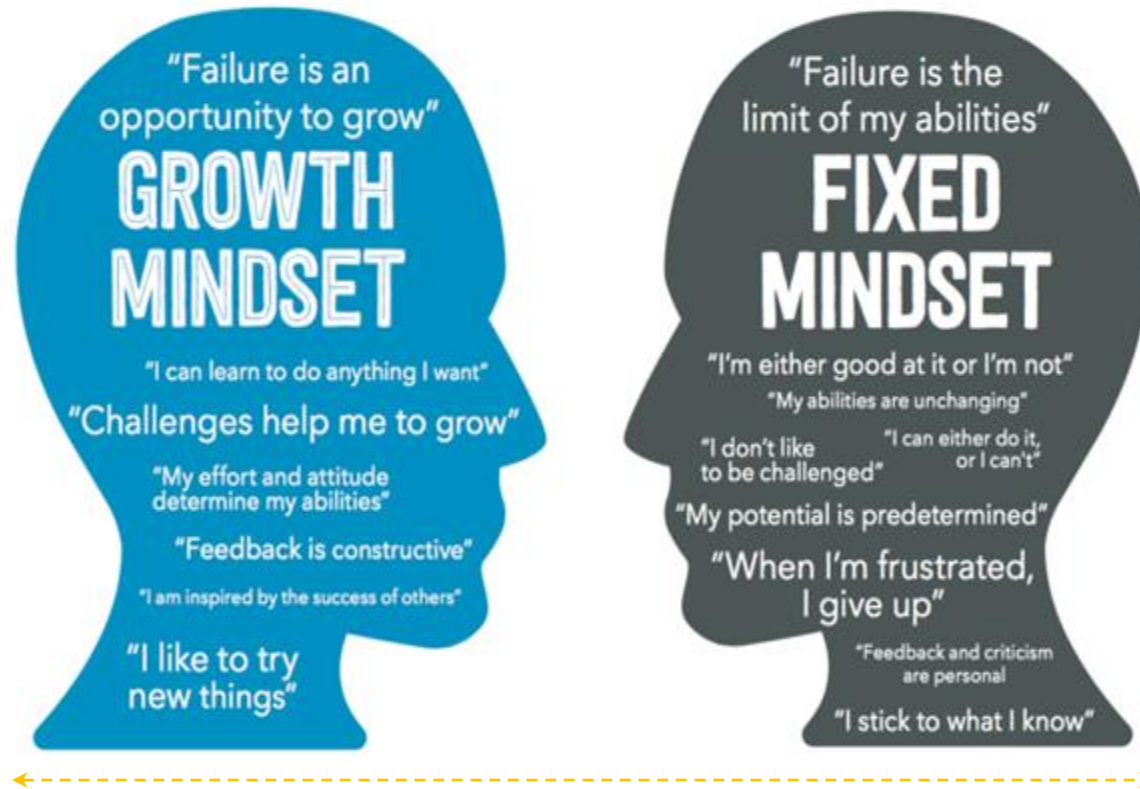
## Instructor

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Amin

# Agreement #1 – Cultivate Growth Mindset



We are here to learn, embrace setbacks, and mistakes

## Agreement #2 – Disconnect to connect



**Turn off your phone**  
Or put it on silent mode



**Penalty**

# Agreement #3 – Connect & Bond with Class



Listen twice  
and speak once

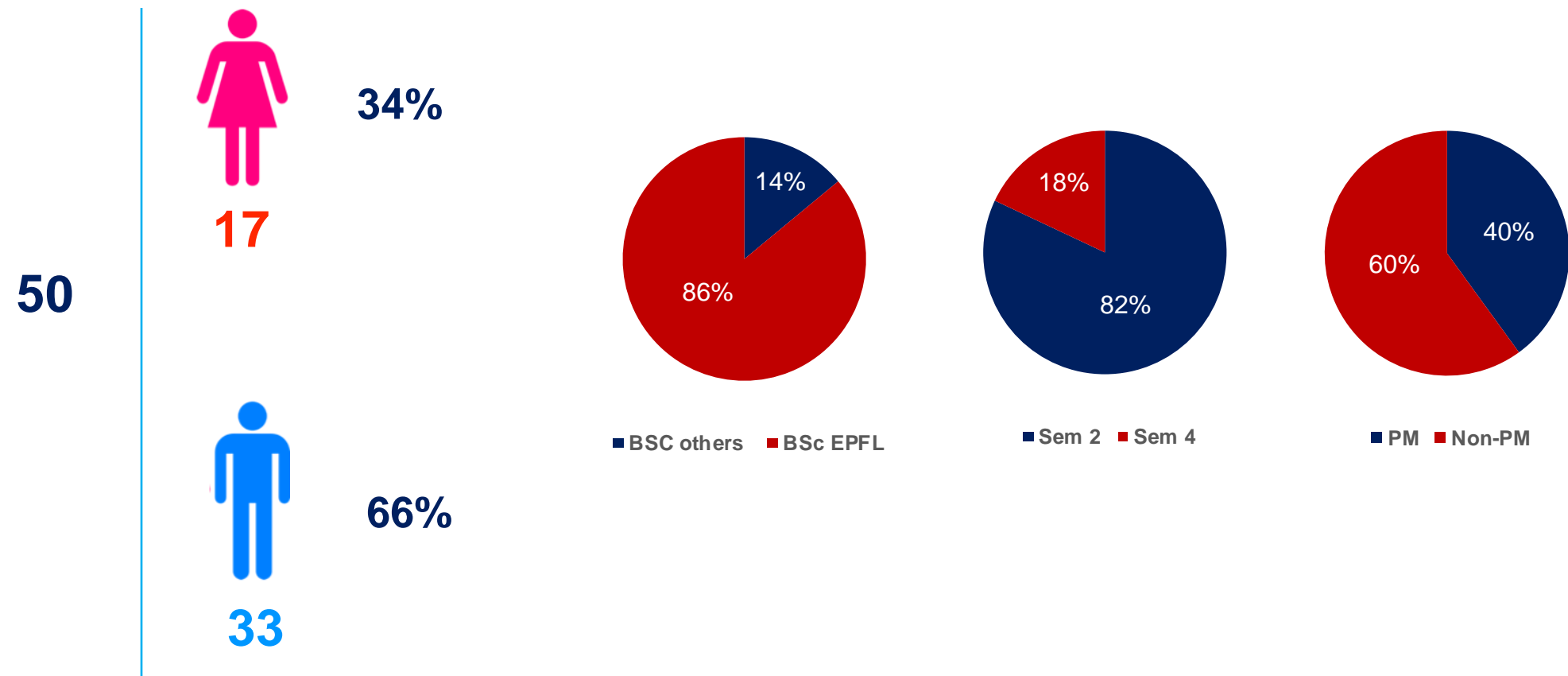


Effective Communication  
4-sentence rule



Question?  
Raise your hand

# CIP25 – Statistics



# About You?



**3 Min**

1



**Meet your classmates**

2



**Introduce yourself**

Your name

Why did you take this course?

What is special about you?

3



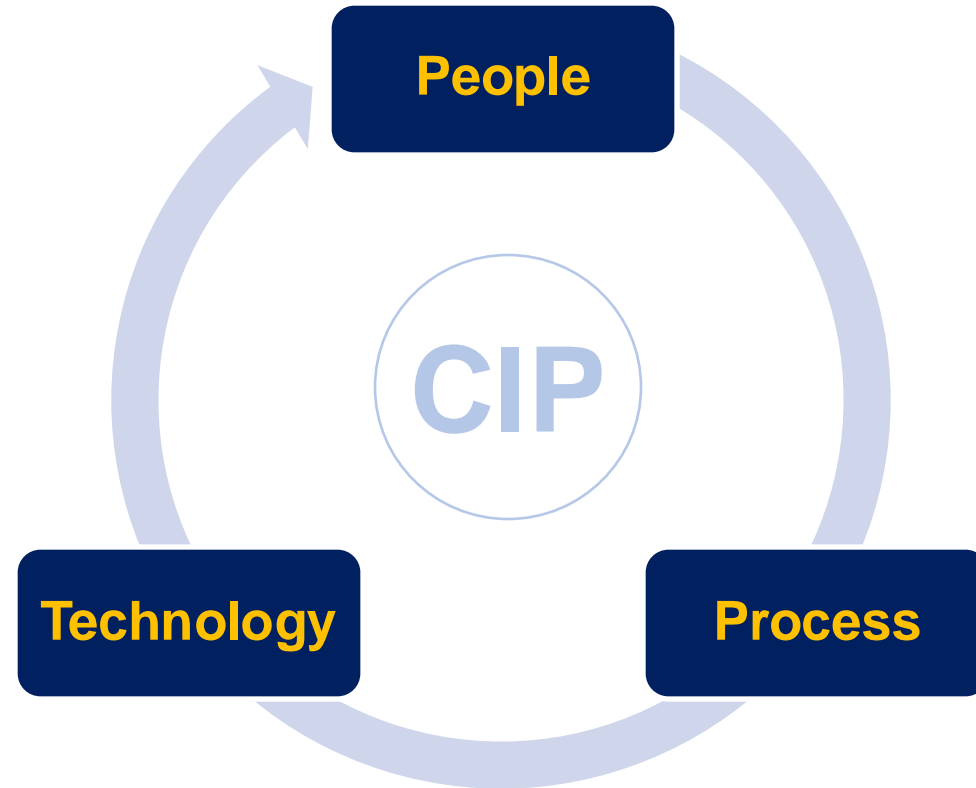
**Listen and connect**

# Agenda

- **13:15 – 14:00** Introduction to Continuous Improvement(ME-498)
  - Class statistics
  - The course objectives, framework, structure, assessments, ...
  - Motivation and expectations
  - Assessment methods and success factors
  - Summary of seven Agreements



# Continuous Improvement (CIP)



# The Course Objectives



Understanding how a company can **change and improve**.



Recognizing the **critical challenges** that a company may face during change.



Analyzing **change and improvement plan** of given product/company.



Knowing how to **lead change and make improvement** for a given product/company.

# The Learning Outcomes

By the end of the course, the student must be able to:



Understand **fundamentals of change and improvement**.



Evaluate and analyze a system based on **key performance indicators**.

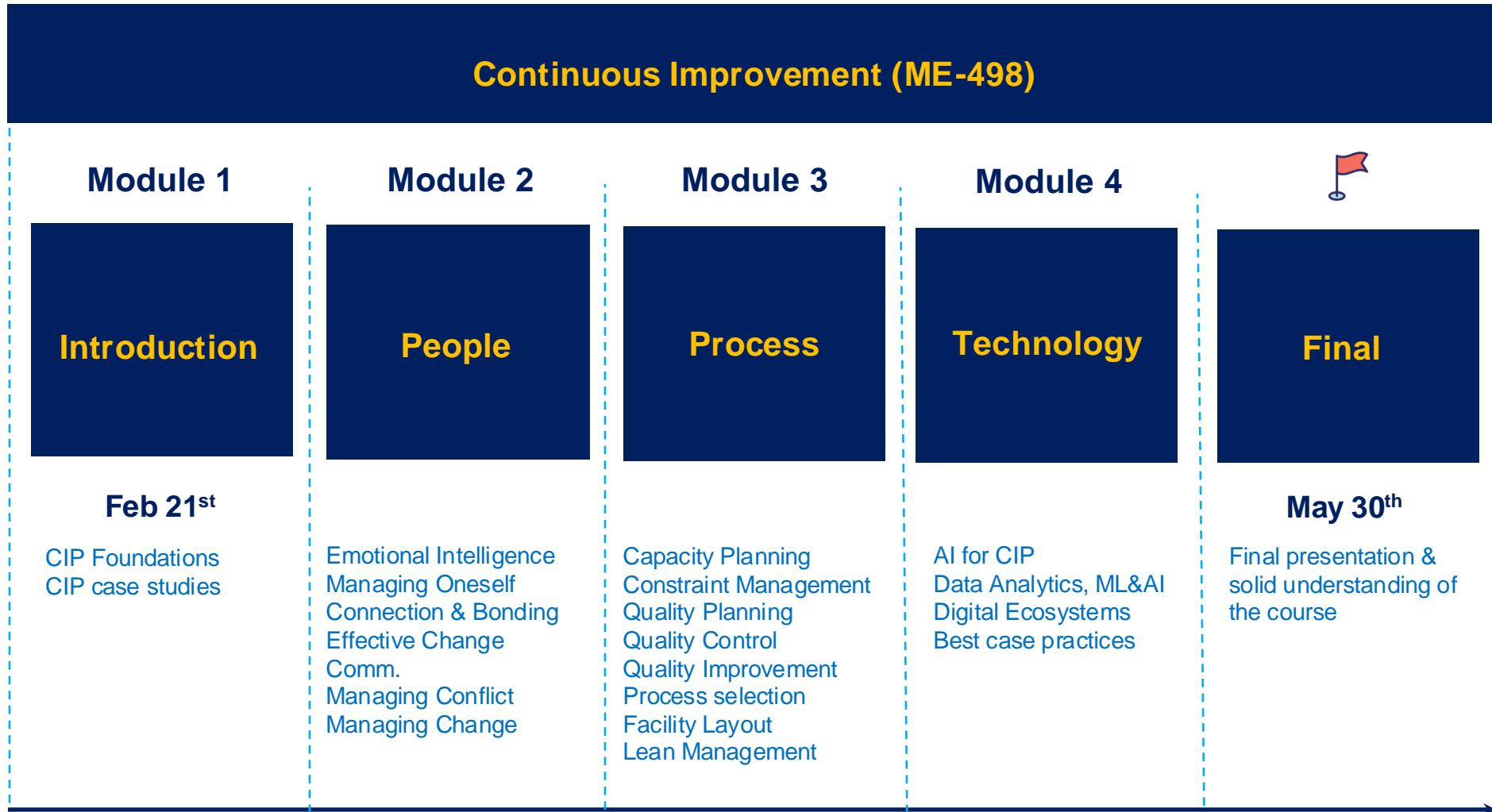


Design and execute a **change and improvement plan** for a system.

# Course Framework



**Change Plan**  
Strategic plan



# Course Weekly Plan



Weekly Announcement  
on Moodle

Continuous Improvement of Manufacturing Systems - CIP - (ME-498)							
Student Journey	Date	Student Activity	Week	Learning objectives	Session 1: 13:15-14:00	Session 2: 14:15-15:00	Session 3: 15:15-16:00
Students will decide to stay or drop the course	21/2/2025	Getting familiar with CIP course structure, their roles and responsibilities	1	Course Introduction, CIP Framework 1. Course introduction and learning objectives. 2. Identify core pillars/framework of the course. 3. What is our journey and what will we learn?	All about CIP (Intro, Class stat, Course structure, Class policies, ...), grading	Lecture: CIP Foundations (Technology, Process, People) In-Class Exercise: Swiss Video	Play & Practice: CIP Foundations (Technology, Process, People)
	28/2/2025	1) Reading the book chapter - Capacity Planning (Page 1- Page 11) 2) Prep for Quiz of Week 3 3) Find a case and receive approval 4) Submission of Assignment 1	2	Introduction to Capacity Planning & Change 1. Understand Capacity Planning – Define capacity, key drivers, and demand alignment. 2. Apply Analytical Tools – Use Excel and simulations for capacity assessment. 3. Explore Change Management – Key aspects of managing change and growth mindset.	Lecture • Play & Practice: (Module 3: Process) Capacity Planning In-Class Exercise: Excel (Lindt 1-2)	Lecture • Play & Practice: (Module 3: Process) Capacity Planning In-Class Exercise: Excel (Lindt 1-2)	Hand out Assignment 1: Case 2 (for groups 1,2,3,7,8,9) & Case 3 (for groups 4,5,6,10,11,12) Presentation Assignment 1 Case 2: Hershey & Case 3: TNT Express Hand out Assignment 2: Case Study - Installing Growth Mindset in Microsoft Hand out Assignment 3: Capacity Planning
Happy hour at Sat	7/3/2025	1) Reading the book chapter - Capacity Planning - (Page 11-Page 17) 2) Find a case and receive approval 3) Submission of Assignment 2	3	Understanding Constraint Management and Emotional Intelligence 1. Assess comprehension of key business statistics concepts. 2. Understand how to analyze and manage process constraints effectively. 3. Develop self-awareness and emotional intelligence for leadership	Quiz (Business Statistics): Chapter 1, 3, 4, 5, 6, 10 1) 15 min - Quiz (multiple choice) 2) 15 min Q&A 3) 15 min - Self-check for groups (re-grouping) and case study approval	Lecture: (Module 3: Process) Constraint Management In-Class Exercise: Excel (Lindt 3-4)	Lecture • Play & Practice: (Module 2: People) Self-awareness & emotional intelligence In-class discussion of Assignment 2: Case study - Growth Mindset at Microsoft Hand out Assignment 4: Constraint Management
	14/3/2025	1) 1) Reading the book chapter - Managing Waiting Lines (Page X - Page X) 2) Submission of Assignment 3	4	Introduction to Waiting Lines Management 1. Understand the Fundamentals of Waiting Line Management 2. Develop Managerial Decision-Making Skills Using Queuing Models 3. Understand the Fundamentals of Waiting Line Management	Lecture • Play & Practice: (Module 3: Process) Managing Waiting Lines In-Class Exercise: Excel (Excel 1-2)	Lecture • Play & Practice: (Module 3: Process) Managing Waiting Lines In-Class Exercise: Excel (Excel 1-2)	Simulation Game: (Module 3: Process) Balancing Process Capacity In-class Debrief Presentation Assignment 3: Capacity Planning
Student feedback	21/3/2025	1) Reading the book chapter - Quality Planning (Page X - Page X) 2) Submission of Assignment 4	5	Understand Quality Planning and its impact on Operations 1. Define Quality and explain its importance in manufacturing and service industries. 2. Develop Practical Skills in Quality Tools and Analysis 3. Understand the basics of Quality Control Methods	Lecture • Play & Practice: (Module 3) Quality Planning In-Class Exercise: Excel exercise Assignment 5: Quality Planning	Play & Practice: (Module 3) Quality Planning In-Class Exercise: Excel exercise Assignment 5: Quality Planning	Lecture • Play & Practice: (Module 3) Quality Control In-Class Exercise: Excel exercise Assignment 6: Quality Control Presentation Assignment 4: Constraint Management & Managing Waiting Lines

Block Schedule  
(Subject to change)

# Class Structure (Min 8h/week required)



# Assessments – Continuous Evaluation

**30%**  
Final report  
Final presentation  
\*understanding of the course\*



**25%**  
Class engagement  
(Presence & Participation)

**45%**  
Class assignments/projects/cases  
Presentations  
Reports

# Learning Disabilities – Inform Teaching Team ASAP



## Dyslexia

Affects reading and related language-based processing skills



## Dyscalculia

Affects a person's ability to understand numbers and learn math facts



## Other

Dysgraphia, Non-verbal learning disabilities, Oral/written language disorder, ADHD, ...



# Your Motivation & Expectation(s)



7 min



## Question 1:

What is your motivation for taking “CIP”?



## Question 2:

What do you expect to learn?



## Question 3:

What would be an ideal outcome/take away for you?

# What Do We Expect From You?



## Individual

Respect  
Presence  
Involvement



## Team

Respect  
Teamwork  
Openness to learn

# Key Success Factor – Attention



## **Self-learning**

Reading slides  
Hand-outs



## **Class learning**

Play & Practice  
Guest speakers



## **Group learning**

Team work  
Creating study groups

# Resources



Slides



Hand-outs



Case Studies

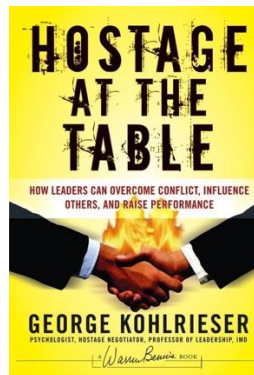
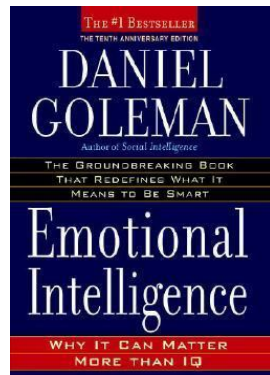
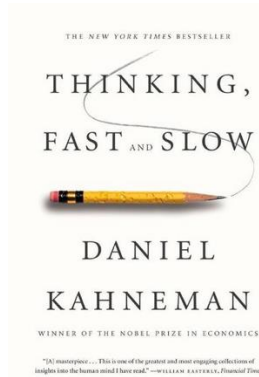
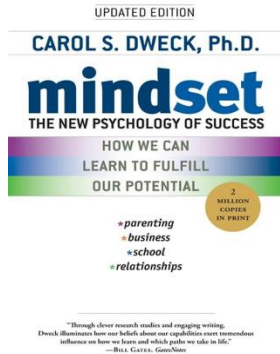


Videos

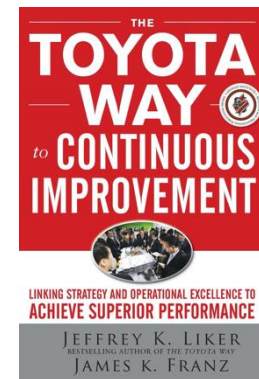
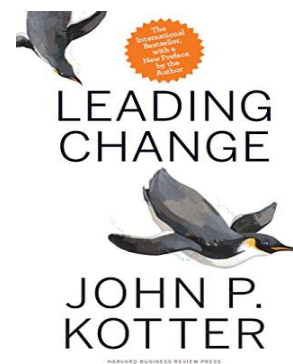
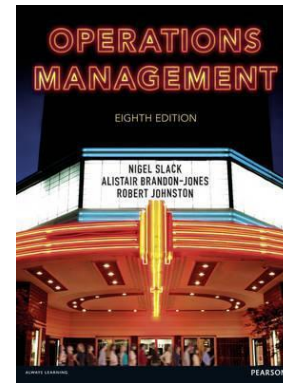


Books

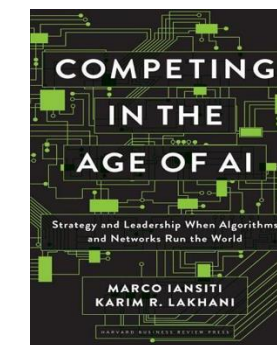
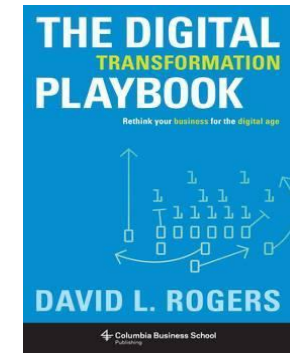
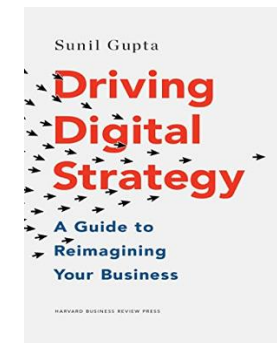
# Resources – Selected Books



Module 2: People



Module 3: Process



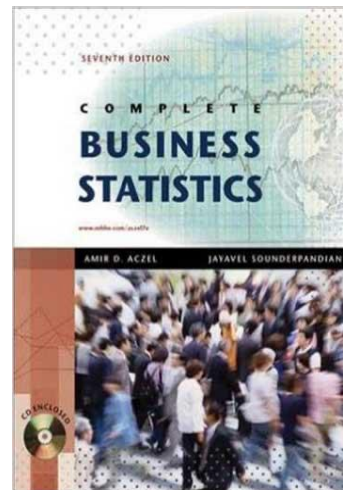
Module 4: Technology

# Learning Prerequisites – Required Courses

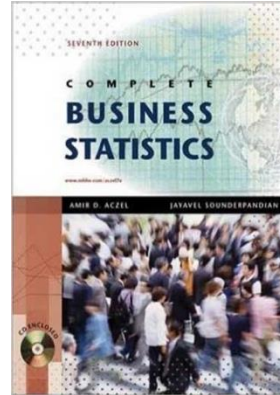
## Required Courses

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### Probability & Statistics



# Quiz – Basic Statistics



## Chapter 1

Descriptive  
Statistics

## Chapter 3

Random  
Variable

## Chapter 4

Normal  
Distribution

## Chapter 5

Sampling &  
Distribution

## Chapter 6

Confidence  
Intervals

## Chapter 10

Regression &  
Correlation

- Chapters are shared on Moodle
- Friday March 7<sup>th</sup>; Session 1
- Multiple choices on Moodle

# Agreement #4 – Stay Connected/Communicate via Moodle

Continuous improvement of  
manufacturing systems



Dashboard › My courses › ME-498



CIP25



Hand-outs



Plans



Data



Slides



Videos, ...



# Agreement #5 – Report Professionally



Executive summary/abstract  
Conclusion



Problem/Analysis/Outcome



Citation and referencing

## Agreement #6 – Present Professionally



Structured, short,  
concise, to the point



Visualize  
Problem/Analysis/Outcome



Respect allocated time

# Agreement #7 – Giving and Receive Effective Feedback



Feedback is a gift



Feedback/comments are  
always welcome

# Seven Agreements – Summary



Cultivate Growth mindset



Stay connected off-class (Moodle)



Disconnect to connect



Report Professionally



Present Professionally



Connect and bond with your team, coaches, class



Give and receive effective feedback

# 7 Reasons to **NOT** Take This Course

1. Friday afternoons (13:15-17:00)
2. Overlap with other courses and participate less than 85%!
3. The course is **human-centric** and needs **your full involvement**
4. **No passion for products**
5. There is **no** cookbook, and you need to read from different references!
6. High **workload** and **limited time!**
7. **Disagreement** with the seven agreements!

# 7 Reasons to Take This Course

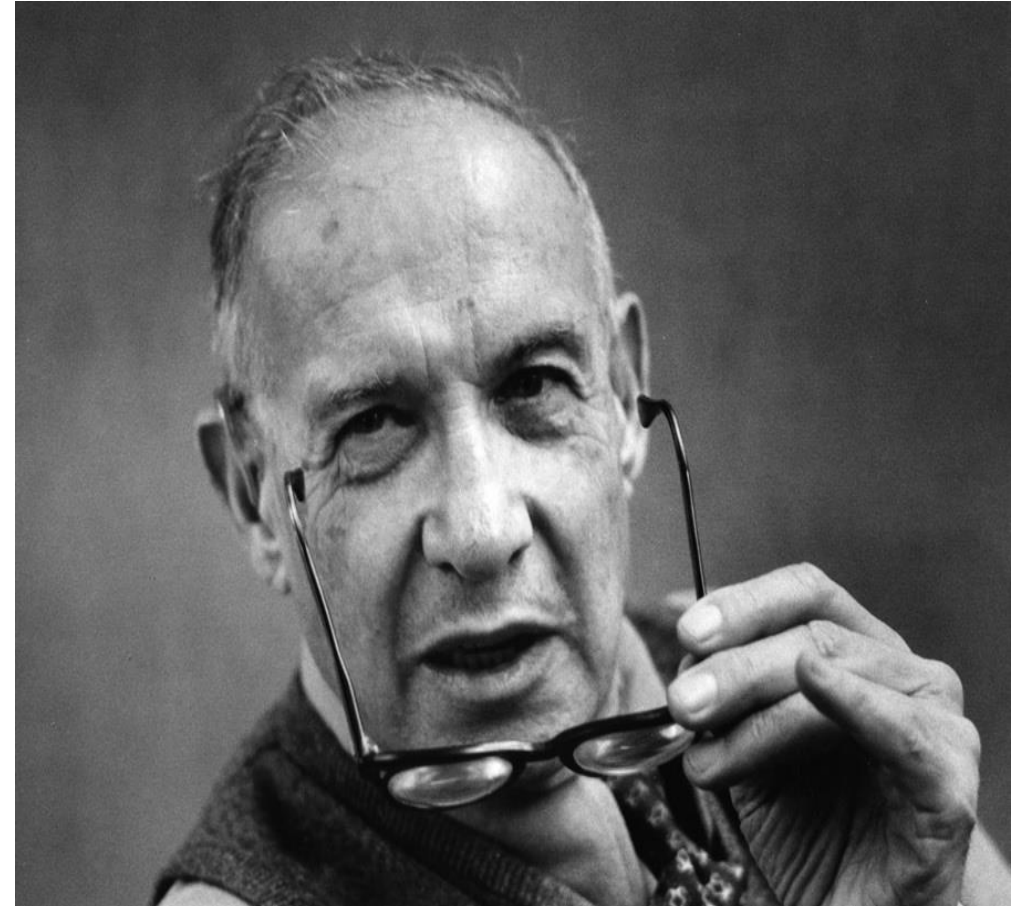
1. **Set of practical and hands-on skills** that equip you for industry
2. Practice how to **attend (pay attention)**
3. Learn to **build authentic connection** with your team, coach, class
4. Nurture your passion for product innovation and design
5. Learn how to **manage multiple aspects of a process in a tight deadline**
6. Learn how **industry experts and various companies** manage products
7. You **master the seven agreements** over the semester

# You Have a Choice

“... In a few hundred years, when the history of our time will be written from a long-term perspective, it is likely that the most important event historians will see is not technology, not the Internet, not e-commerce.

It is an unprecedented change in the human condition. **For the first time, literally, substantial and rapidly growing numbers of people have choices.** For the first time, they will have to manage themselves. And society is totally unprepared for it.”

Peter Drucker 1909-2005



# **Continuous Improvement (CIP23)**

## **Group Formation & Introduction to CIP**

Amin Kaboli

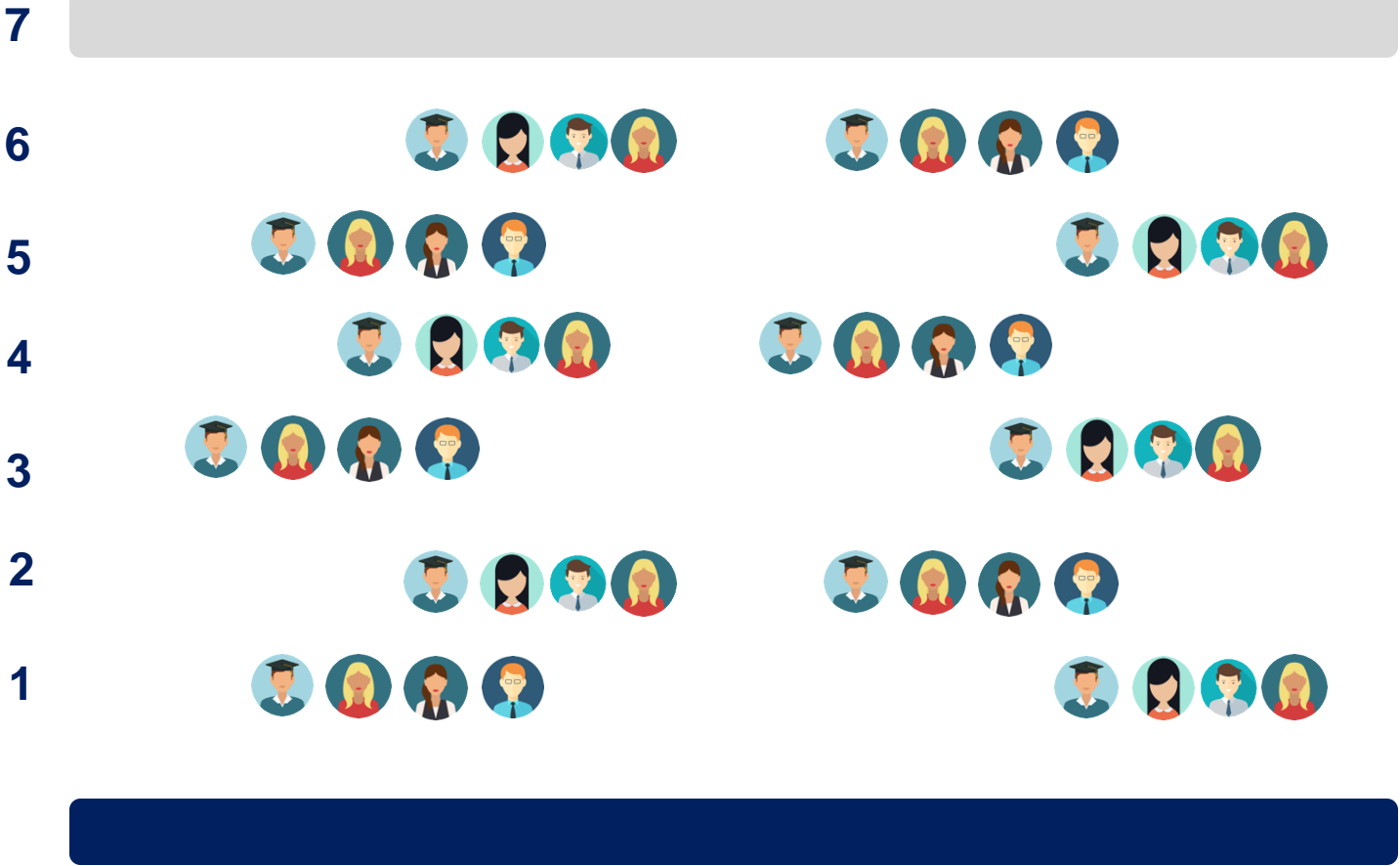
Week 1, Session 2, Feb 21<sup>st</sup>, 2025



# Group Formation



10 Min



# Ques-cussion?



**3 Min**

A question-based discussion:

- All interventions must be questions
- Only one question at a time

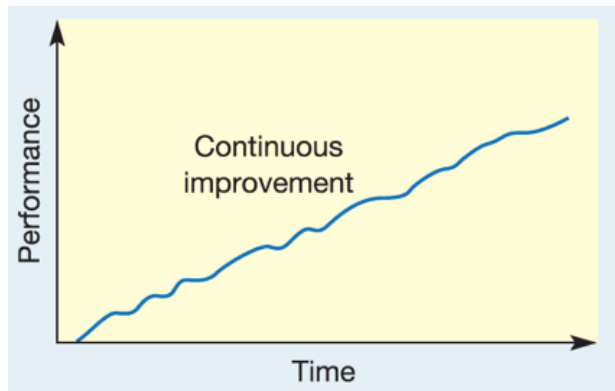
**What is Continuous Improvement?**

## Continuous Improvement – Definition

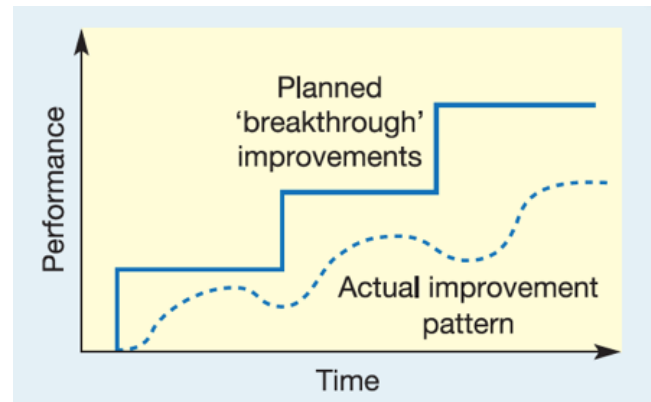


An ongoing effort to improve products, services, or processes.

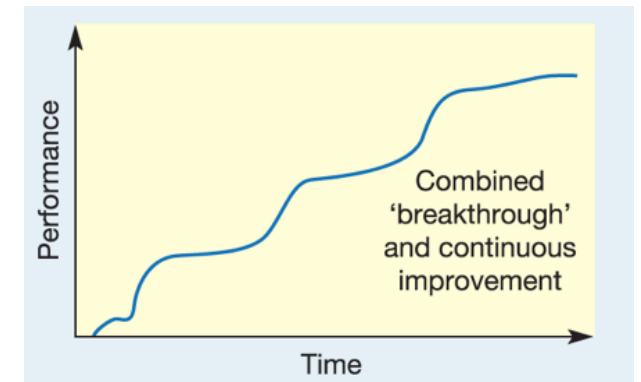
# Continuous Improvement – Types



Incremental

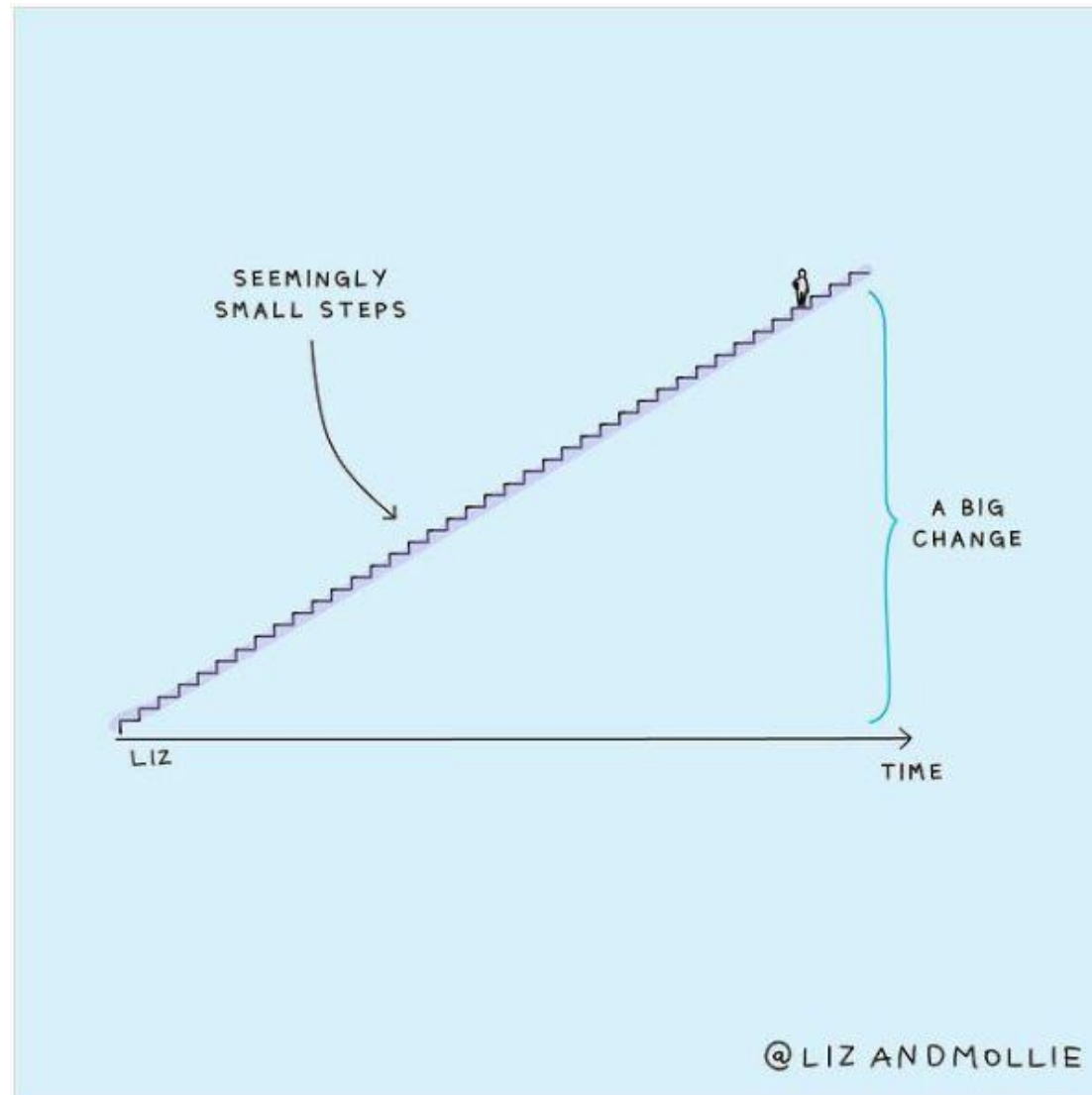


Transformational or breakthrough



Combined

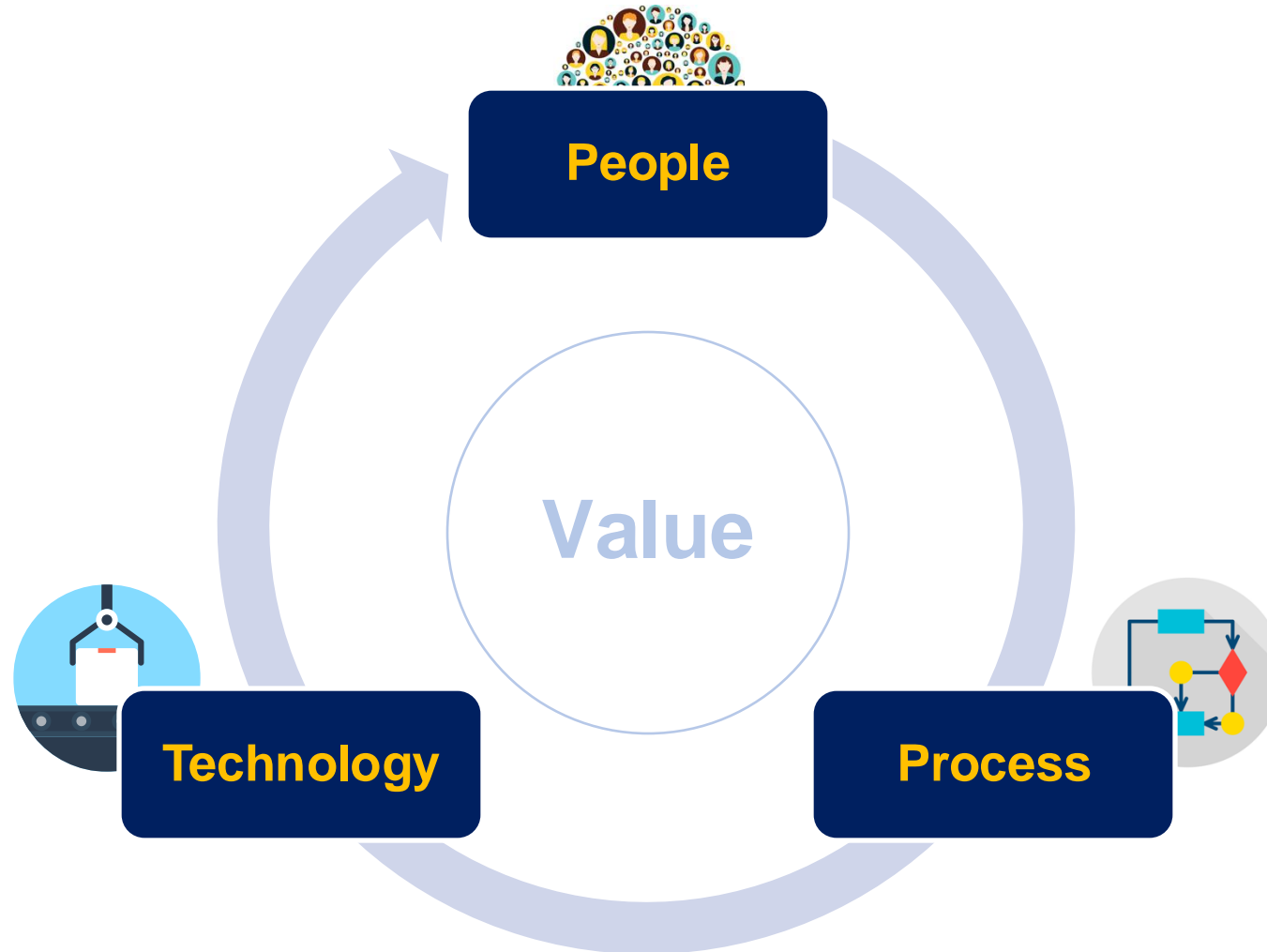
Improvement efforts can seek **incremental** improvement over time or **breakthrough** improvement all at once, or **combined**.



# Continuous Improvement – Modules



# Continuous Improvement – Modules



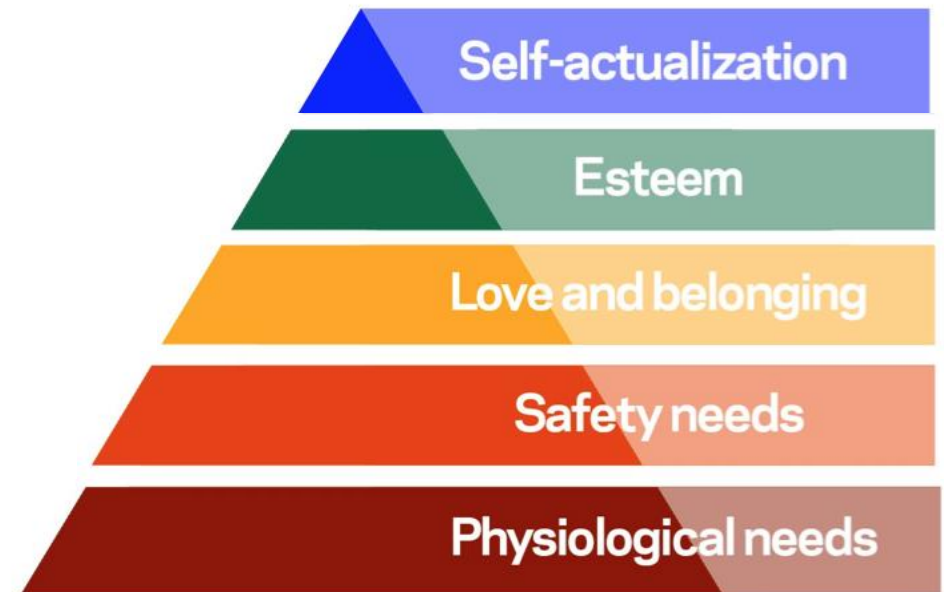
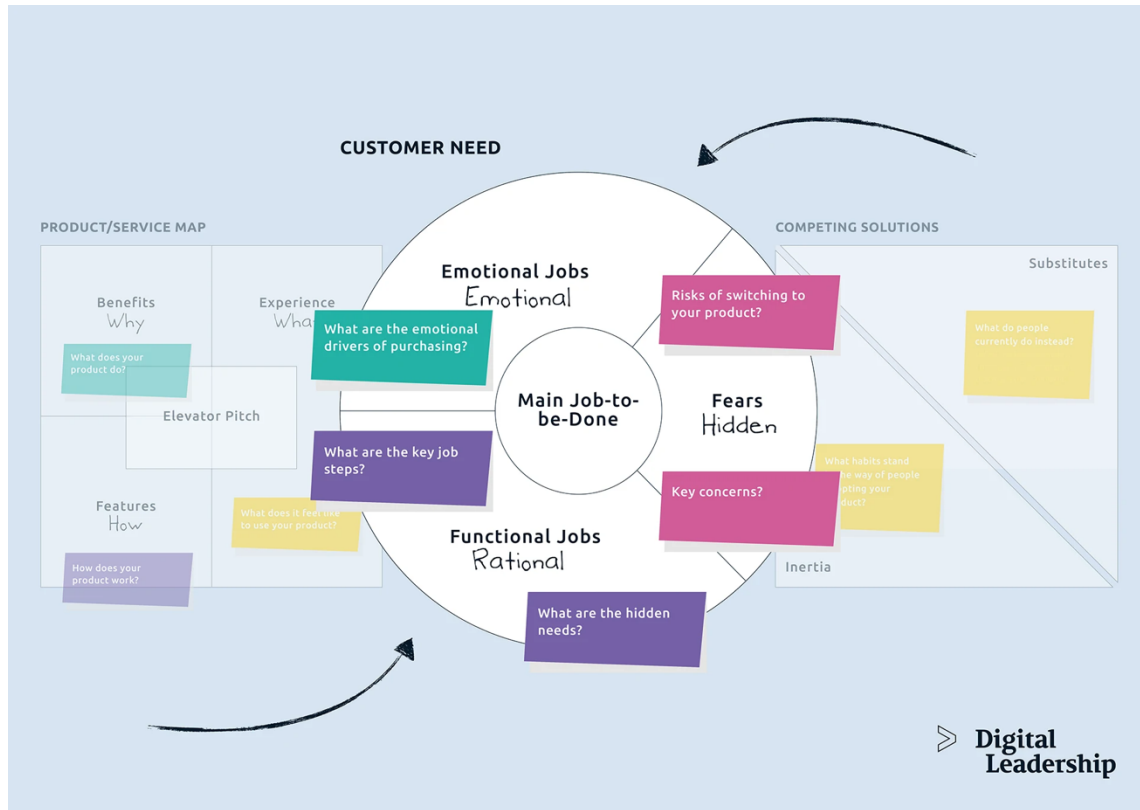
# What is Value?



???



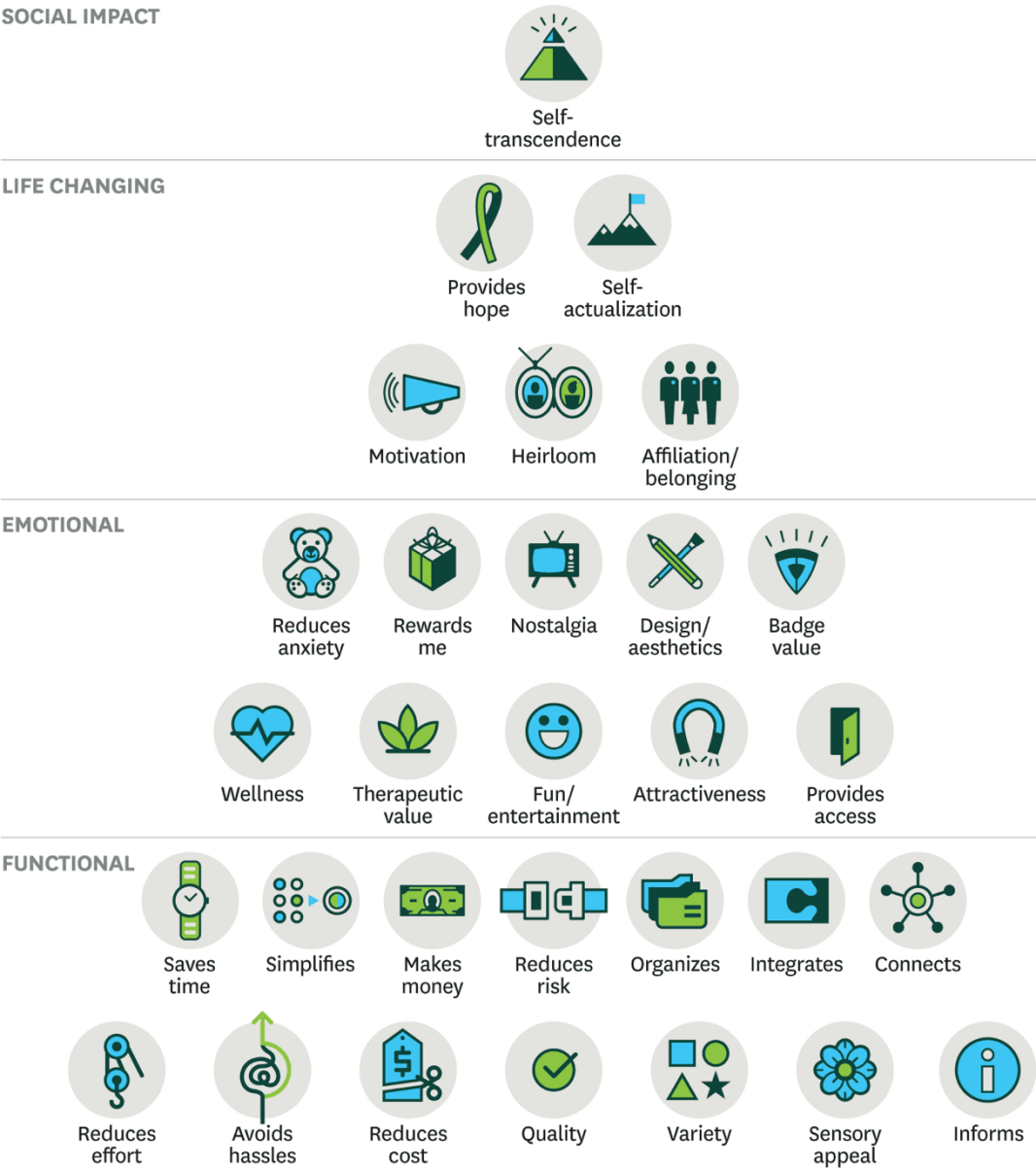
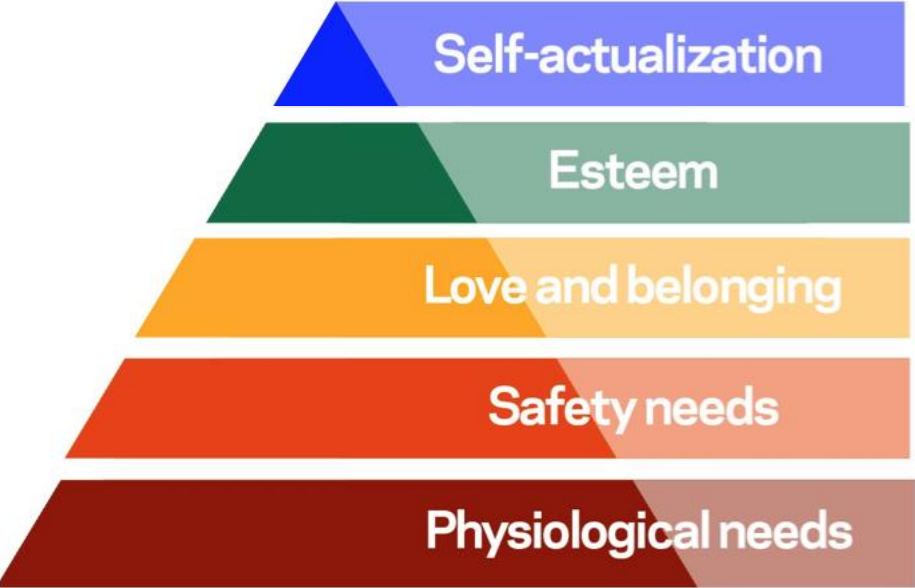
# Value & Needs



Source: A. Maslow, A Theory of Human Motivation, 1943.

A value is a conscious choice to act in a certain manner to meet your own **needs**.

# The Elements of Value



Source: 2015 Bain & Company - The Elements of Value, Harvard Business Review, 2015

# What Are Elements of Values?



## SOCIAL IMPACT



Self-transcendence

## LIFE CHANGING



Provides hope



Self-actualization



Motivation



Heirloom



Affiliation/belonging

## EMOTIONAL



Reduces anxiety



Rewards me



Nostalgia



Design/aesthetics



Badge value



Wellness



Therapeutic value



Fun/entertainment



Attractiveness



Provides access

## FUNCTIONAL



Saves time



Simplifies



Makes money



Reduces risk



Organizes



Integrates



Connects



Reduces effort



Avoids hassles



Reduces cost



Quality



Variety



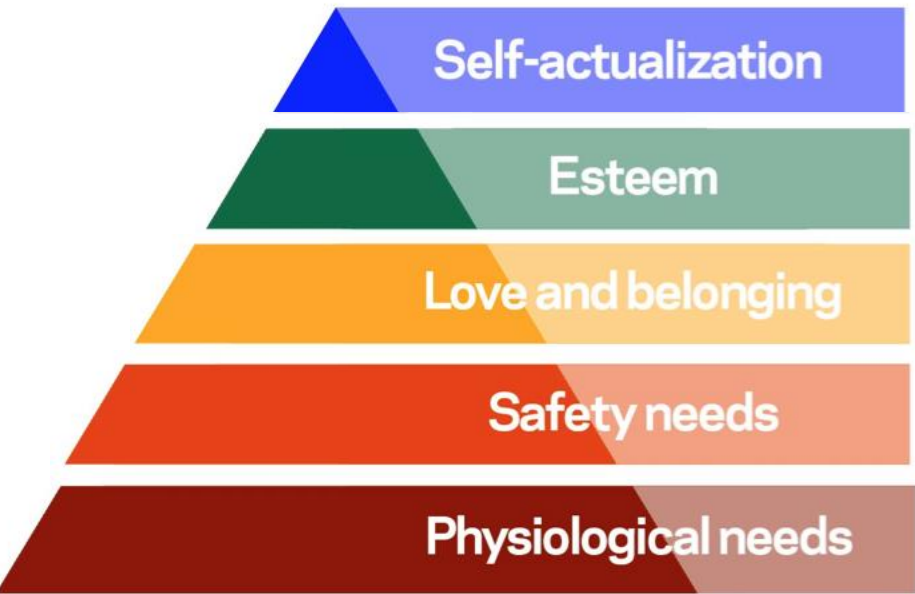
Sensory appeal



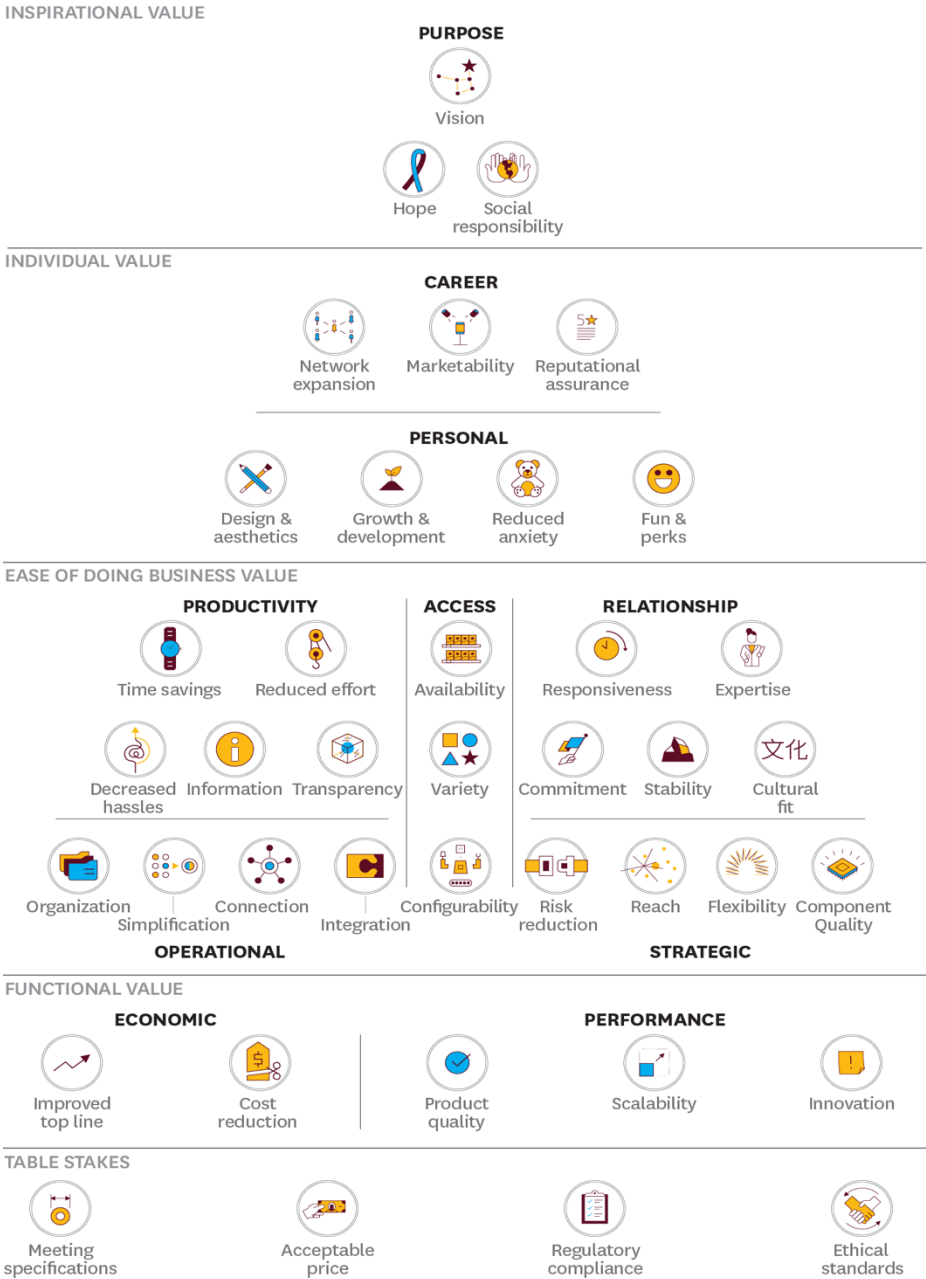
Informs

Source: 2015 Bain & Company - The Elements of Value, Harvard Business Review, 2015

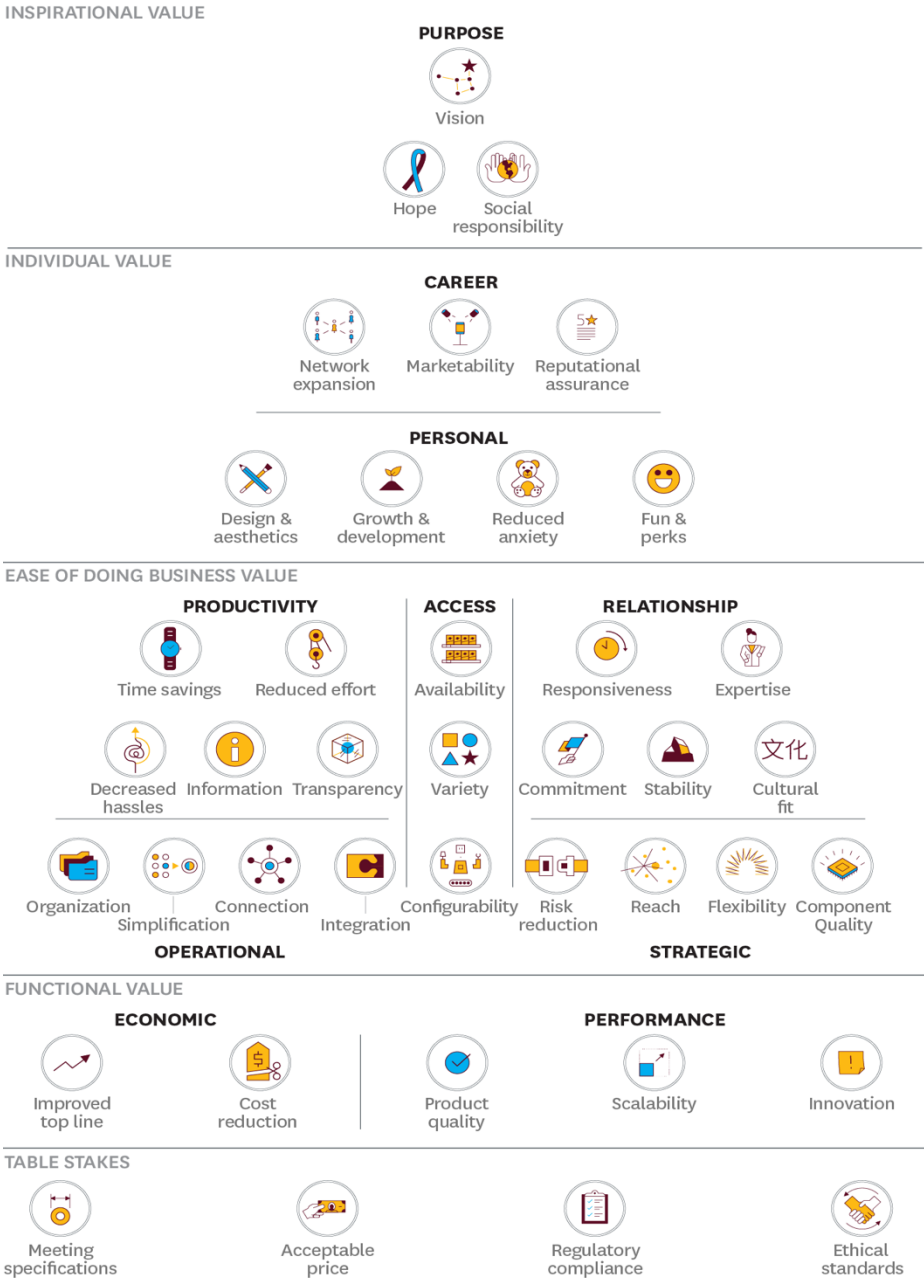
# The B2B Elements of Value



Source: 2018 Bain & Company - The B2B Elements of Value, Harvard Business Review, 2018



# What Are B2B Elements of Value?



Source: 2018 Bain & Company - The B2B Elements of Value, Harvard Business Review, 2018

# Continuous Improvement (CIP23)

## CIP in Action – Case Study **SWISS**

Amin Kaboli

Week 1, Session 3, Feb 21<sup>st</sup>, 2025



Watch the video  
– CIP at Swiss



Discuss and evaluate the case  
**Problem / Solution / Impact**



Be ready to share your  
answers when asked



**10 min**



**10 min**



**10 min**

# Continuous Improvement at SWISS

Consider all three aspects of people, process, and technology while answering the following questions:

People

Process

Technology

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Question 1. What is/are the **problem(s)**?

Question 2. What is/are the **solution(s)**?

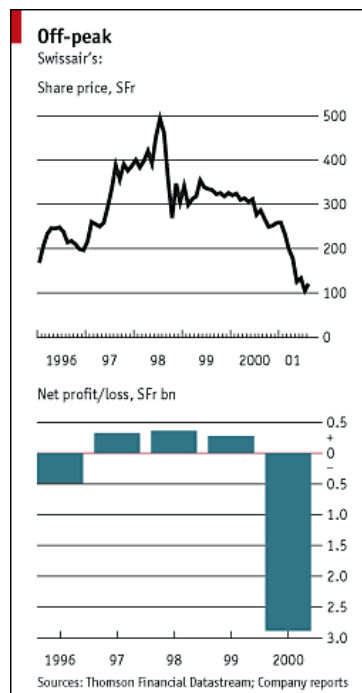
Question 3. What is/are the **impact(s)**?

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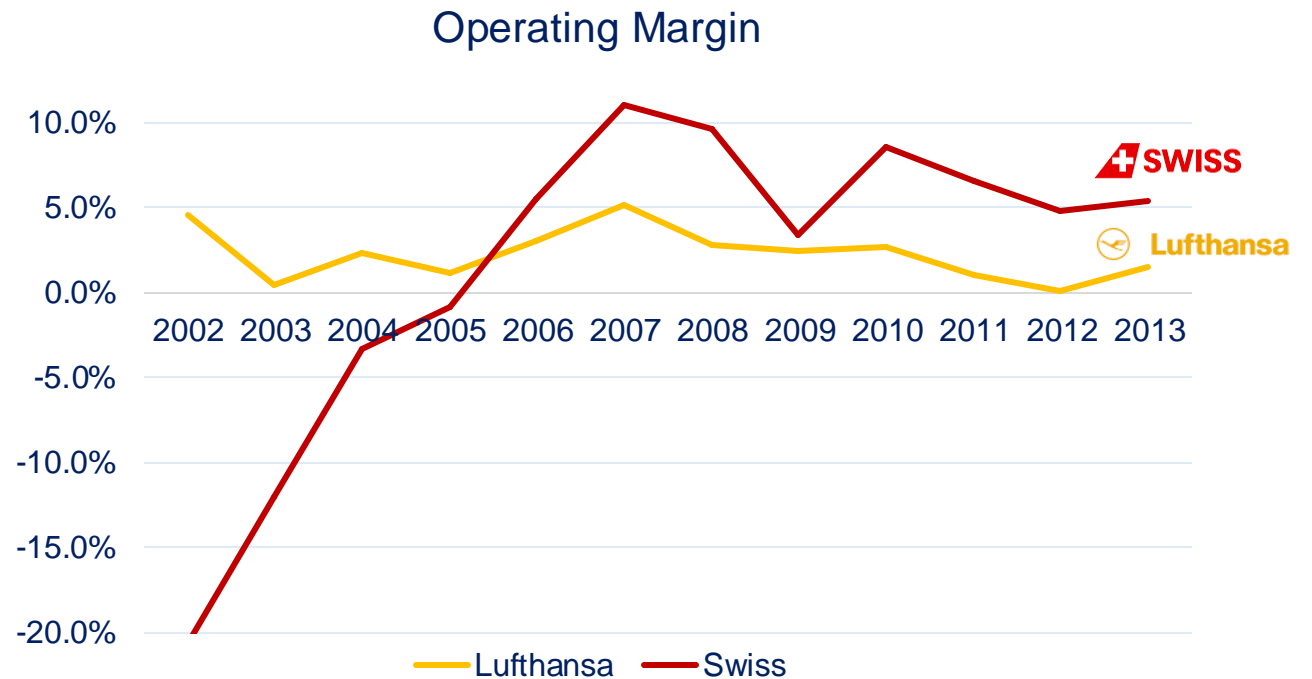


# **SWISS** From Bankruptcy to Profit

Swissair was bankrupt in 2001. Saved by Swiss government and sold to Lufthansa. It was a story of a financial disaster. However, in 2007-2008 Swiss Airlines became an outstanding contributor to Lufthansa profits ...



Source: Economist



# Continuous Improvement at SWISS



10 min

Consider all three aspects of people, process, and technology while answering the following questions:

People

Process

Technology

---

Question 1. What is/are the **problem(s)**?

Question 2. What is/are the **solution(s)**?

Question 3. What is/are the **impact(s)**?

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# **Continuous Improvement (CIP23)**

## **CIP in Action – Coaching Session**

### **Coaching Rooms (CM1 104, CM1 106)**

Amin Kaboli

Week 1, Session 4, Feb 21<sup>st</sup>, 2025

# CIP in Action



Read the case:  
Nestlé Continuous  
Excellence



15 min



Discuss and evaluate the case  
**Problem / Solution / Impact**



15 min



Be ready to share your  
answers when asked



10 min