School of Computer Science and Engineering (CSE)

COMP9900 Information Technology Project
COMP3900 Computer Science Project

2023 Term 3

Week 9

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Outline

- Project Change Management
- Final Project Demo
- Week 9 Lab Tasks
- Q & A

Project Change Management

Ways to think about change

- to make **different** in some particular
- to make **radically different**
- to give a different **position**, **course**, or **direction to**
- to **replace** with another
- to make a **shift** from one to another
- to **exchange** for an equivalent sum or comparable item
- to undergo a **modification** of
- to undergo **transformation**, **transition** or **substitution**
- **alter** in condition or appearance
- to **substitute** another or others

See https://youtu.be/ndMhYFEwrQc

Organisational Change

Change can be **accidental** or **planned**

- **Reactive** change: changes in organisations just happen, and some organisations treat all change as an **accidental** occurrence
- **Planned** change: change activities that are **intentional** and goal oriented

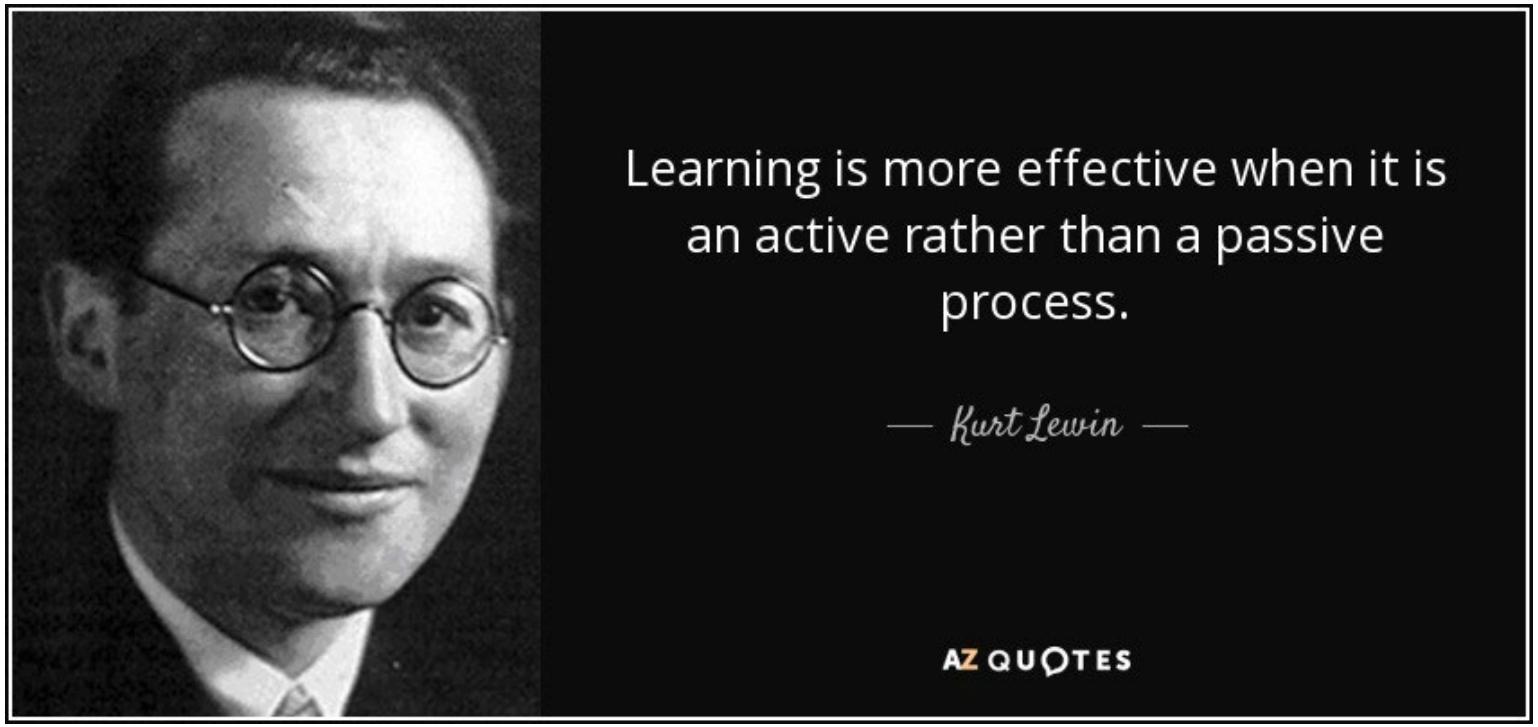
Planned change

- Once managers and an organisation commit to planned change, they need to create a logical step by step approach to accomplish the objectives

- Eight step process for change
  1. recognise the **need**
  2. develop the **goals**
  3. select a **change event**
  4. diagnose the **current climate**
  5. select **implementation method**
  6. develop a **plan**
  7. **implement** the plan
  8. **follow** the plan

Models of Change

1. Lewin's 3-step model
2. Lewin's force field analysis
3. Kotter 8 steps of leading change
4. Action research



1. Lewin's 3-Step Model

- Lewin suggested to reduce resistance as being more effective than increasing forces

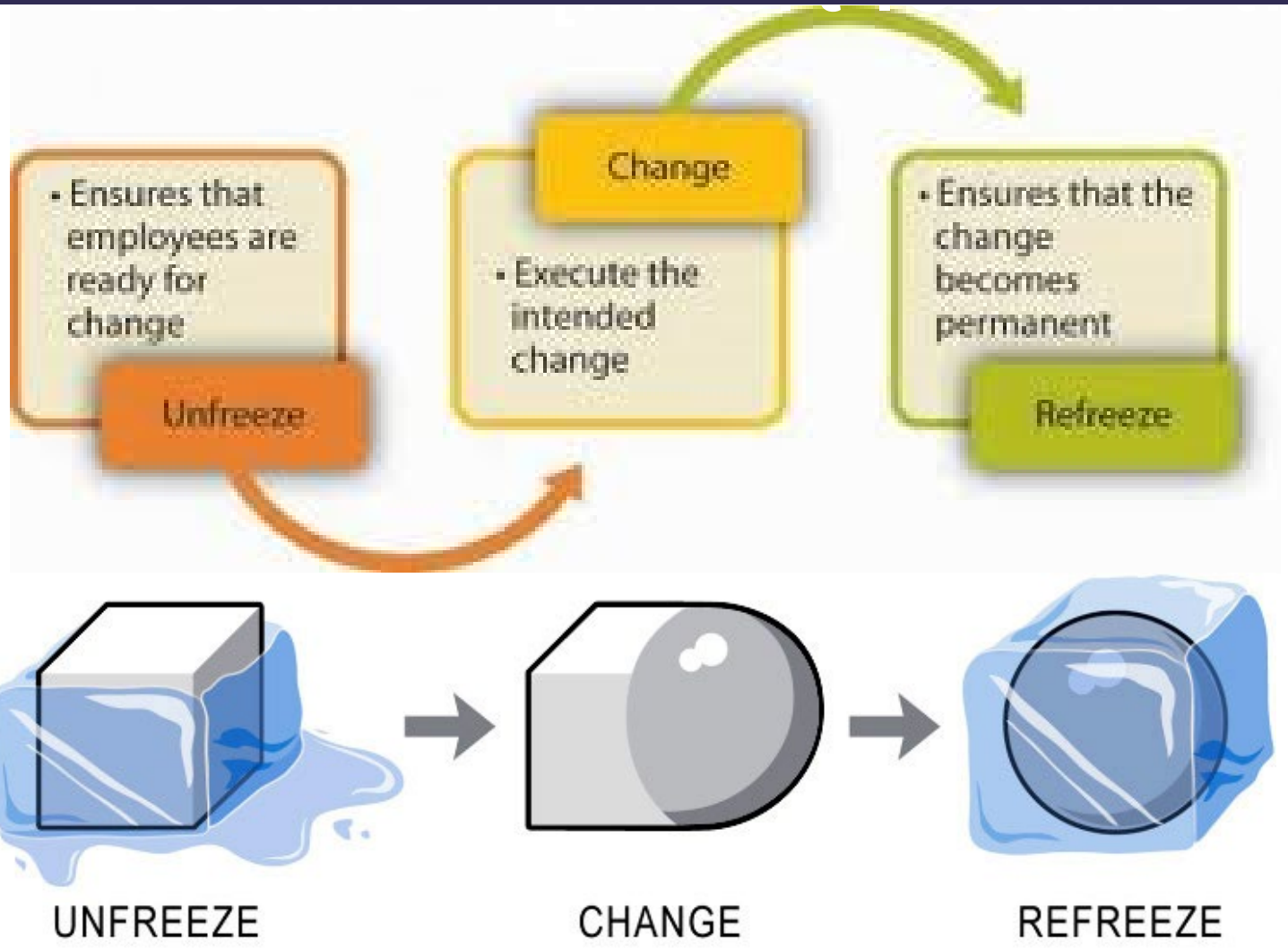
- 3-Step process

  - **Unfreezing:** changing habits and behaviours. Unless organisations undo or 'unfreeze' these old patterns no change can occur

  - **Movement:** (to the new situation) organisation shifts to another level once the habits and behaviours have been 'unfrozen'

  - **Refreezing:** new habits and behaviours have become established in organisation and a new state of equilibrium exists

Models of Change

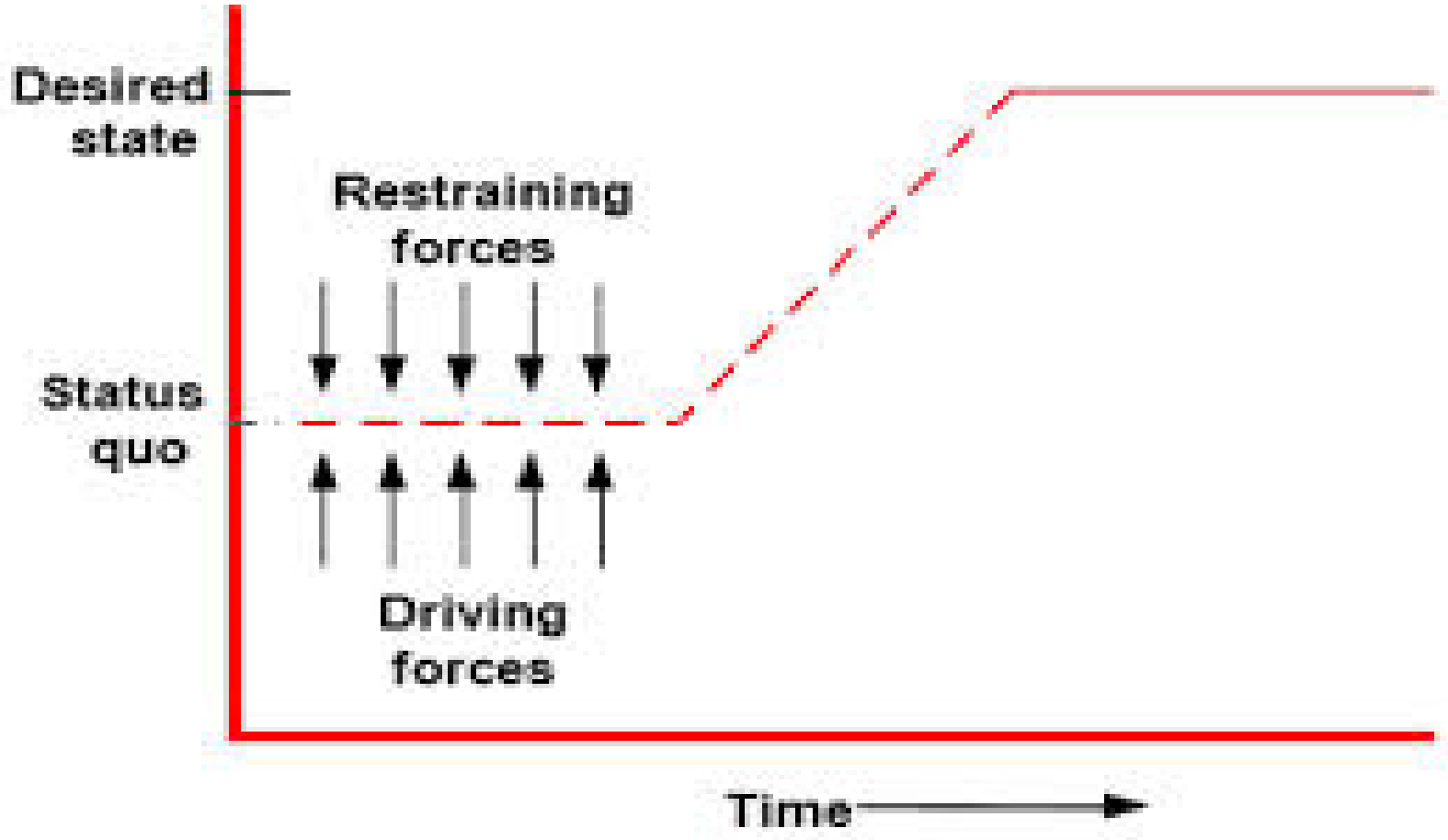


Lewin's three step change model (Robbins, Millett, Cacioppe, & Waters-Marsh, 1998)

2. Lewin's Force Field Analysis Model

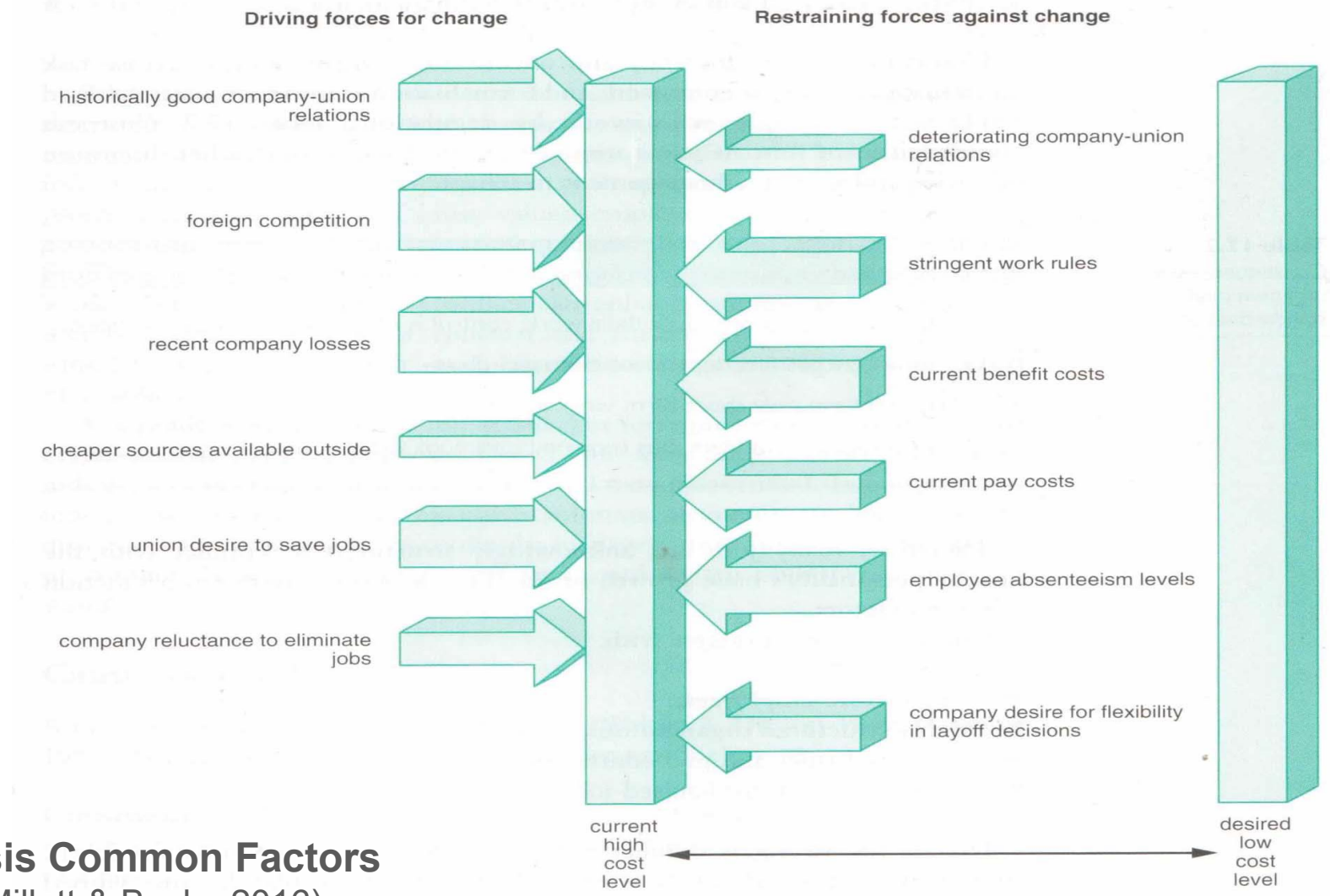
- Earliest change model was developed by Kurt Lewin. His theory of **force field analysis** views organisations as two sets of forces
  - those pushing for change **(driving forces)**
  - those striving to maintain the status quo **(restraining forces)**
- When both forces are equal the organisation is said to be in a state of **equilibrium**

Models of Change



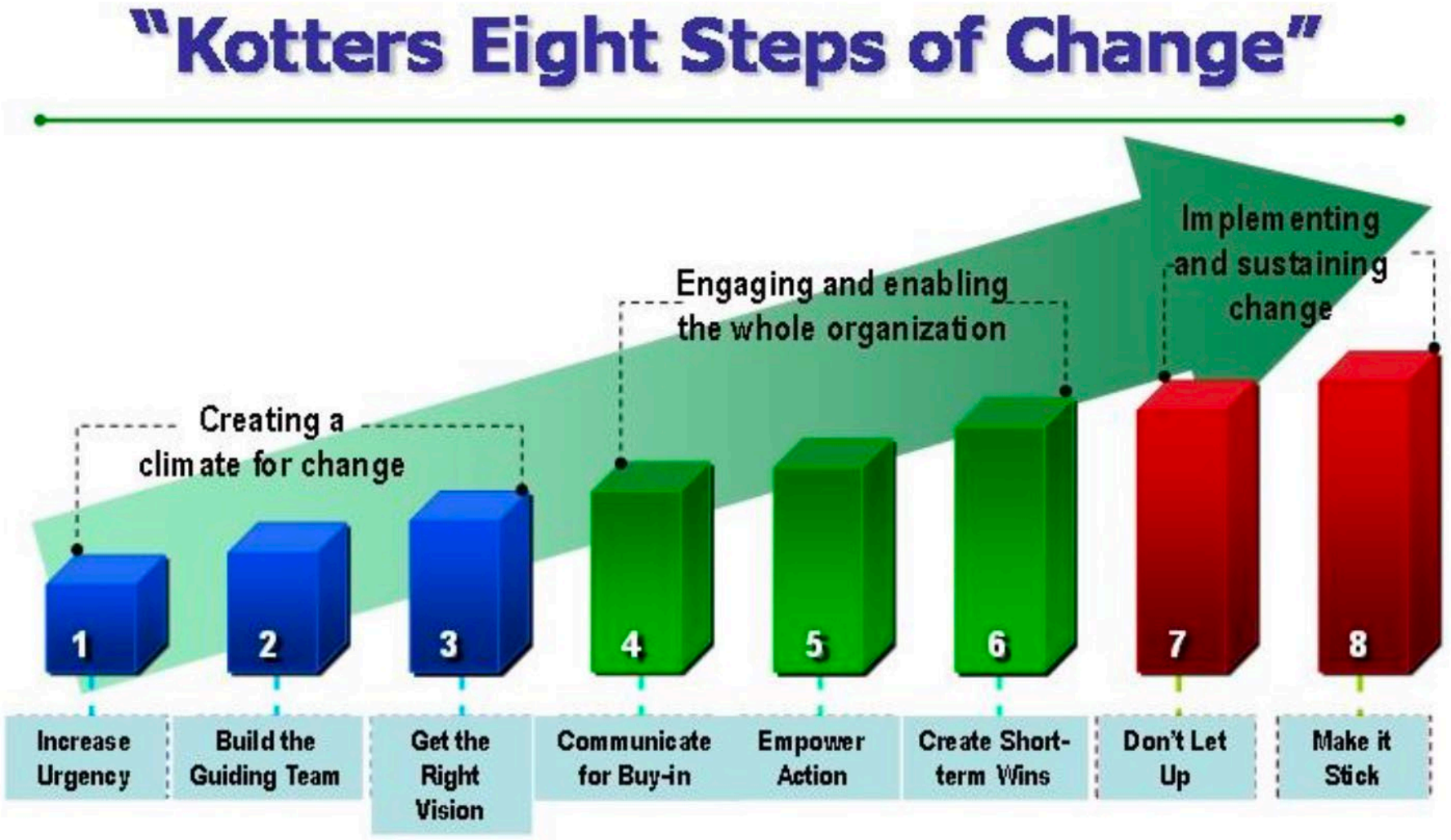
Unfreezing the Status Quo
(Robbins, Millett, Cacioppe, & Waters-Marsh, 1998)

Models of Change



Force-Field Analysis Common Factors
(Robbins, Judge, Millett & Boyle, 2016)

3. Kotter 8 Steps of Leading Change Model

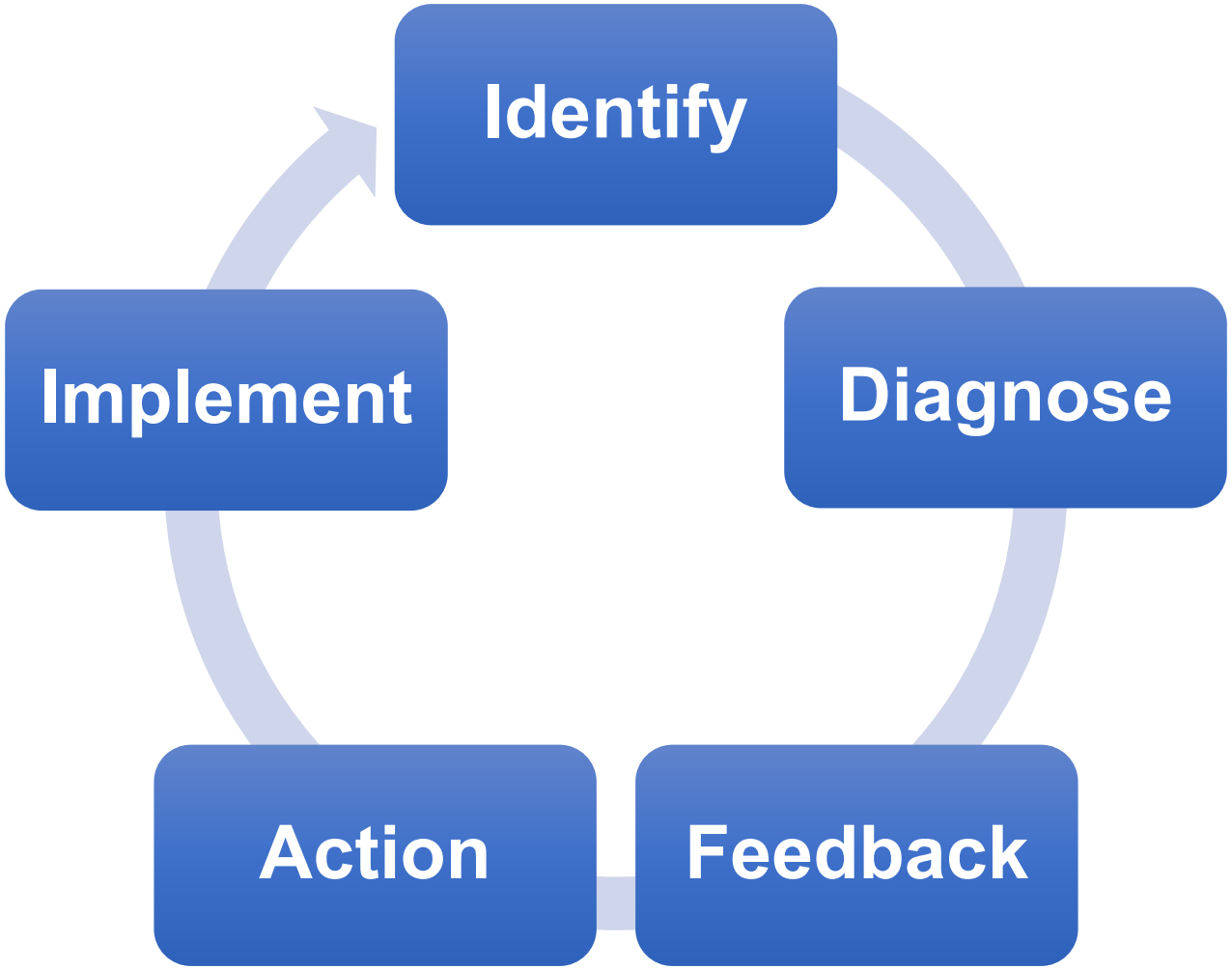


Kotter, John P. and Cohen, Dan S. The Heart of Change. Boston: Harvard Business School Press

4. Action Research Model

- Most current approach to planned change
- Focuses on planned change as a cyclical process
- 5-Step process
  - **Identify** the problem
  - Gather data and **diagnose** problems
  - Provide **feedback** on data collected
  - Develop **action** plan
  - **Implement** plan

Action Research Model



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Reasons People Resist Change

- Kotter and Schlensinger (2008) outline the four common reasons people resist change
  - Parochial self-interest
  - Misunderstanding and lack of trust
  - Different assessments
  - Low tolerance for change

Dealing with Change

- Kotter and Schlensinger (2008) common way to deal with resistance to change
    - Education and communication
    - Participation and involvement
    - Facilitation and support
    - Negotiation and agreement
    - Manipulation and co-optation
    - Explicit and implicit coercion

Managing Resistance to Change

Dealing with Resistance to Change (Kotter & Schlesinger, 2008)

Methods for dealing with resistance to change

Approach	Commonly used in situations	Advantages	Drawbacks
Education + communication	Where there is a lack of information or inaccurate information and analysis.	Once persuaded, people will often help with the implementation of the change.	Can be very time consuming if lots of people are involved.
Participation + involvement	Where the initiators do not have all the information they need to design the change, and where others have considerable power to resist.	People who participate will be committed to implementing change, and any relevant information they have will be integrated into the change plan.	Can be very time consuming if participators design an inappropriate change.
Facilitation + support	Where people are resisting because of adjustment problems.	No other approach works as well with adjustment problems.	Can be time consuming, expensive, and still fail.
Negotiation + agreement	Where someone or some group will clearly lose out in a change, and where that group has considerable power to resist.	Sometimes it is a relatively easy way to avoid major resistance.	Can be too expensive in many cases if it alerts others to negotiate for compliance.
Manipulation + co-optation	Where other tactics will not work or are too expensive.	It can be a relatively quick and inexpensive solution to resistance problems.	Can lead to future problems if people feel manipulated.
Explicit + implicit coercion	Where speed is essential, and the change initiators possess considerable power.	It is speedy and can overcome any kind of resistance.	Can be risky if it leaves people mad at the initiators.

Change Agents

- **Change agents** are people who act as catalysts and assume the responsibility for managing change (Robbins, Millett, Cacioppe, & Waters-Marsh, 1998)
- Project managers are an example of a change agent
- For a change program (e.g., installation of new software) to succeed, it is important to have an internal '**champion**' of change
- **Champions of change** actively and enthusiastically promote the idea, build support, overcome resistance and ensure that the innovation is implemented

Organisational Culture

- **Organisational culture** refers to a system of shared norms, beliefs, values and assumptions that binds people together, thereby creating shared meetings (Larson, Honig, Gray, Dantin, & Baccarini, 2014)

- Handy (1995) classifications of culture
  - **Power**-based culture
  - **Bureaucratic** culture
  - **Task-**based culture
  - **Individualistic** culture

Organisational Culture

Power-based culture	Bureaucratic culture
• Centralised and informal • Get and demonstrate sponsorship	• Centralised and formal • Play by the rules but also use your network

Task-based culture	Individualistic culture
• Devolved and formal • Regular use of project teams and task forces	• Devolved and informal • Everyone has an opinion • Consensus needed

Organisational Culture (Cadle & Yates, 2007)

Organisational Culture

1 *Member identity*—the degree to which employees identify with the organisation as a whole rather than with their type of job or field of professional expertise.
2 *Team emphasis*—the degree to which work activities are organised around groups rather than individuals.
3 *Management focus*—the degree to which management decisions take into account the effect of outcomes on people within the organisation.
4 *Unit integration*—the degree to which units within the organisation are encouraged to operate in a coordinated or interdependent manner.
5 *Control*—the degree to which rules, policies and direct supervision are used to oversee and control employee behaviour.
6 *Risk tolerance*—the degree to which employees are encouraged to be risk taking, innovative and risk seeking.
7 *Reward criteria*—the degree to which rewards such as promotion and salary increases are allocated according to employee performance rather than seniority, favouritism or other non-performance-related factors.
8 *Conflict tolerance*—the degree to which employees are encouraged to express and confront conflicts and criticisms openly.
9 *Means versus ends orientation*—the degree to which management focuses on outcomes rather than on techniques and processes used to achieve those results.
10 *Open-systems focus*—the degree to which the organisation monitors and responds to changes in the external environment.

Organisational Culture Characteristics (Larson, Honig, Gray, Dantin, & Baccarini, 2014)

Organisational Culture

Key Dimensions Defining an Organisation's Culture (Larson, Honig, Gray, Dantin, & Baccarini, 2014)

Organisational Culture

Cultural Dimensions of an Organisation Supportive of Project Management

(Larson, Honig, Gray, Dantin, & Baccarini, 2014)

Project Management and Change

- A change program that combines, training, awareness, communication and business process design activities is crucial to the success of an IS/IT project

- Cadle and Yeates (2007) four overlapping stages in a change program include

    1. Launching the project
    2. Winning hearts and minds
    3. Skill the end-users
    4. After go-live

Project Management and Change

- Reasons why project change can fail (Kotter & Schlesinger, 2008)
  - Not enough sense of urgency
  - Not enough interested parties
  - No vision
  - Under-communication
  - Obstacles always appear
  - No short-term wins
  - Declaring victory too soon
  - Not cementing changes into everyday life

Project Management and Change

- Successful projects have
  - Strong business commitment
  - Clear and detailed scope
  - Requirements that can be delivered through a series of stages
  - Proactive project manager
  - Clear process for dealing with project changes

Final Project Demo

Final Project Demo

- Final Project Demo worth **20% (or 20 marks)**
- Divided into two main criteria:
  - **Technical Quality** and **Completeness** of the Project as Demonstrated worth **70% (or 14 marks)**
  - **Structure** and **Delivery** of the Demo/Presentation worth **30% (or 6 marks)**

Final Project Demo

Category	Max Mark	Team Mark
Technical Quality and Completeness of the Project as Demonstrated (70%)	**14**	
Complete, fully functional, correct and coherent demonstration/presentation by all team members, covering all project objectives	6	
User interfaces are well designed and working without issues	4	
High technical quality, demonstrating excellent engineering practice, and solid methodology	4	
Structure and Delivery of the Demo/Presentation (30%)	**6**	
Demonstration is well prepared, and confidently and professionally delivered	2	
Demonstration is well structured with evidence of good team work	2	
Q and A handled well	1.5	
Adherence to demo/presentation time requirements	0.5	
Total Mark (out of 20)	**20**	**0**

Final Project Demo

- Examples of **high technical quality** include (but not limited)
  - providing a well thought out diagram overview of the system architecture
  - a great description of how the system design provides fault tolerance
  - correctly describing at a high level why the domain model is maintainable/extendable

Final Project Demo

- Examples of **excellent engineering practice and solid methodology** include (but not limited)

  - using test-driven approach to development
  - using behaviour-driven approach to development
  - using unit testing
  - using pull requests for code reviews
  - using retrospectives
  - using pair programming

Week 9 Lab Tasks

Week 9 Lab Tasks

- Make sure that you are familiar with the remaining assessment items (**final demo**, **project report**, and **software quality**) marking criteria

- Note that the **final demo/presentation** is different to **progressive demos** since you will demo/present the **whole developed system**

Week 9 Lab Tasks (cont'd)

- Each **member must speak** during the final demo. If there are **five members** in a group, each member should speak for **around 3-4 minutes**. Maybe more for teams of **four/three** members
- Your demo/presentation **must not exceed 18 minutes** (excluding Q & A time) and **be at least 15 minutes**
- The final demonstration/presentation should be **live** (i.e., **not pre-recorded**)
- Each member who is **NOT present** or does **NOT speak** at some stage during the demonstration/presentation will get **0/20** for the final demo

Week 9 Lab Tasks (cont'd)

- The system you demonstrate in your final demo **must** be the final system you hand in on **Friday Week 10** as part of your **Software Quality** assessment
- This developed final system should be targeted to the **environment specified by the project clients**
- To help make it easier just for the purposes of the final demo, you will not be punished if you demo on another environment (e.g., from your laptop/PC) but you should be demonstrating the **same system** you will hand in for your **Software Quality** assessment and is targeted to the environment specified by the project clients

Week 9 Lab Tasks (cont'd)

- Make sure your team schedules a **meeting** with your **project clients** to show them your progress and get more feedback and clarifications before your scheduled final demo in Week 10
- For marking your project, if you **integrate** with any **third-party services** (e.g., **email API**), you should keep such integrations working for **at least one month** after the **Software Quality** assessment due date on **Friday Week 10**
- A reminder to also keep your individual **work diaries** up to date in **GitHub Classroom**

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Q & A