



# Module 2

# Systems and Design Thinking Skills

Delivered By:

**PROF. DR. SAMSILAH ROSLAN**

Director of Putra Science Park, Universiti Putra Malaysia

[sciencepark.upm.edu.my](http://sciencepark.upm.edu.my)

# Introduction – What is Systems Thinking?

- **Definition** : "A system is a set of interconnected parts working together toward a goal."
- **Simple example** : "Your office is a system – people, tools, routines, outcomes."



# Why is Systems Thinking Important?

## Relevance

Systems thinking helps us identify the RIGHT problem and come up with the RIGHT solution.

## Key point:

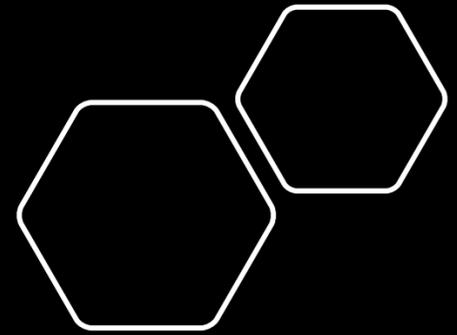
Helps solve chronic, tricky problems (not one-offs), and helps connect small changes to bigger impacts.

## Discussion prompt:

"Have you tried to solve a persistent problem that refused to go away? What might you have missed?"

## 2. KIDLIN'S LAW:

If you can clearly  
write down a  
problem, then it is  
half solved.



# Module 2 (continued)

# Design

# Thinking Skills

Presented By:

**PROF. DR. SAMSILAH ROSLAN**

Director of Putra Science Park, Universiti Putra Malaysia



# What is Design Thinking?

**Definition:** “A human-centered, creative problem-solving approach.”

**Visual:** The five stages – Empathize, Define, Ideate, Prototype, Test.

**Bullet:** Why it matters for universities (better student experience, streamlined processes, innovation).

**Quick Icebreaker:** “Share one campus process you wish worked better!”





UPM  
UNIVERSITI PUTRA MALAYSIA  
BERILMU BERBAKTI

PUTRA  
PERTANIAN UNTUK RAKYAT

PUTRA  
SCIENCE  
PARK

# Personality types: Give it a try!



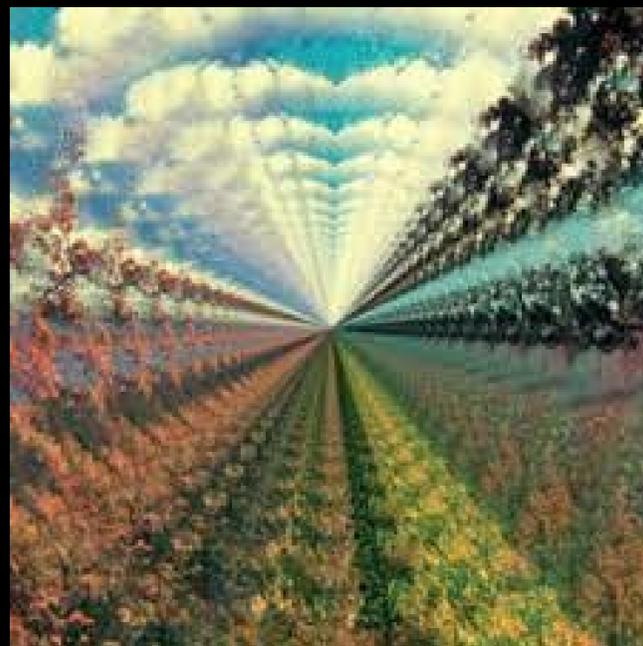
<https://www.16personalities.com/free-personality-test>



sciencepark.upm.edu.my

**Five Personality Aspects:  
Mind, Energy, Nature, Tactics  
and Identity**

**Spectrum vs Continuum**



## Mind

This aspect shows how we interact with our surroundings:



**I**ntroverted individuals prefer solitary activities and get exhausted by social interaction. They tend to be quite sensitive to external stimulation (e.g. sound, sight or smell) in general.



**E**xtraverted individuals prefer group activities and get energized by social interaction. They tend to be more enthusiastic and more easily excited than Introverts.

## Energy

The second aspect determines how we see the world and process information:



Observant individuals are highly practical, pragmatic and down-to-earth. They tend to have strong habits and focus on what is happening or has already happened.



Intuitive individuals are very imaginative, open-minded and curious. They prefer novelty over stability and focus on hidden meanings and future possibilities.

## Nature

This aspect determines how we make decisions and cope with emotions:



**Thinking** individuals focus on objectivity and rationality, prioritizing logic over emotions. They tend to hide their feelings and see efficiency as more important than cooperation.



**Feeling** individuals are sensitive and emotionally expressive. They are more empathic and less competitive than Thinking types, and focus on social harmony and cooperation.

## Tactics

This aspect reflects our approach to work, planning and decision-making:



**J**udging individuals are decisive, thorough and highly organized. They value clarity, predictability and closure, preferring structure and planning to spontaneity.



**P**rospecting individuals are very good at improvising and spotting opportunities. They tend to be flexible, relaxed nonconformists who prefer keeping their options open.

## Identity

Finally, the Identity aspect underpins all others, showing how confident we are in our abilities and decisions:



Assertive (**-A**) individuals are self-assured, even-tempered and resistant to stress. They refuse to worry too much and do not push themselves too hard when it comes to achieving goals.



Turbulent (**-T**) individuals are self-conscious and sensitive to stress. They are likely to experience a wide range of emotions and to be success-driven, perfectionistic and eager to improve.

# Malaysia Personality Profile

**Respondents: 480,684**

Respondents from Malaysia are likely to be:

...slightly more Introverted than Extraverted (+1.17%)

...slightly more Intuitive than Observant (+0.71%)

...significantly more Feeling than Thinking (+18.52%)

...slightly more Prospecting than Judging (+4.30%)

...significantly more Turbulent than Assertive (+11.74%)

# Wrap-Up & Next Steps

**Summary:** "Systems thinking helps us move from reacting to events, to shaping successful, resilient UPM processes."



Feedback link/QR code for session improvement and further resources.



[sciencepark.upm.edu.my](http://sciencepark.upm.edu.my)



# Module 2

# Systems and Design Thinking Skills

**THANK YOU**