

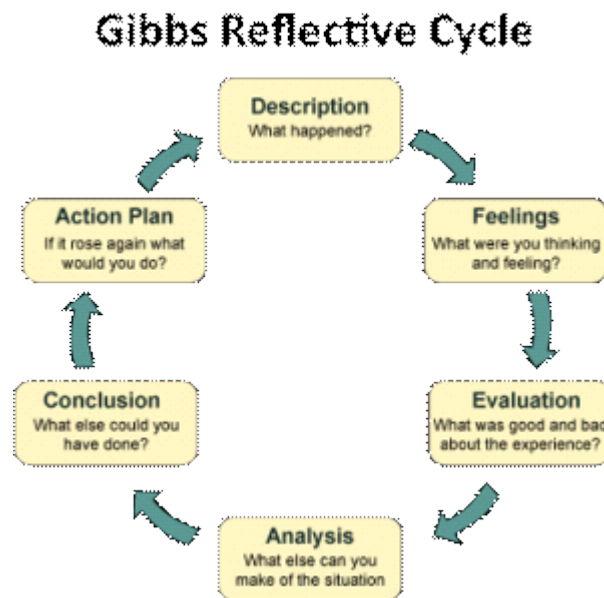
# **PROFESSIONAL SKILLS**

## **SHORT NOTE**

2022/11/20

# Personal development planning

- ★ PDP is driven by
  - Reflecting
  - Planning
- ★ **Reflective practice** is important to look back at your mistakes and from the experience you have gained, you should not repeat those mistakes



- ★ PDP is also called professional development plan in professional world.
- ★ Goal analysis
- ★ To prepare a strategic plan to achieve your target, do a **SWOT** analysis.
  - Strengths: [What skills/experience you already possess](#)
  - Weaknesses: [What could you improve on?](#)
  - Opportunities: [What resources are available to you?](#)
  - Threats: [What obstacles do you face?](#)
- ★ After SWOT analysis, **SMART** plan can be used to develop the needed skills.
  - Specific
  - Measurable
  - Achievable
  - Relevant
  - Time bound

# Values, beliefs, attitudes and character

## ★ Values: Principles that helps to decide what is right and wrong, and how to act in various situations

- **Foundation values:** Values we need to have a solid foundation to our lives
- **Focus values:** value priorities in our lives
- **Future values:** values that we intend to develop in the future

- 💡 Values help us understand why we believe and what we believe.
- 💡 Shared values are the basis of relationship.
- 💡 Understanding values will also help to motivate us.
- 💡 Knowing our own values make us more tolerant of others values.
- 💡 Knowing our foundation values helps us to deal with difficulty and stress

## ★ Beliefs: constructs that we hold to be true especially without any proof

## ★ Attitude: Mindset or a tendency to act in a particular way

- 💡 Able to view a person's attitude from the behavior.
- 💡 It is an emotional reaction to objects or people
- 💡 It cause us to behave in a particular way toward a person

Positive attitude	Negative attitude
Pay attention to the good rather than the bad	Ignore good. Pay attention to the bad
Encouraged to do the same in the future	Discouraged
Believes everything is happening for the best	Believes their best days were in the past
Can achieve long term goals easily	Not easy to achieve long term goals
Always see opportunities	Only sees the limitations

## ★ Character: A group of qualities that make a person/thing different from others



- ★ Knowing values, beliefs and attitudes helps us to develop a compelling character, to live a remarkable professional life

**The Johari Window Model**

# Teams for teamwork

- Large team (20 - 30)
- Small team (2 - 5)
- Short team
- Long team

## ★ Tuckman's 5 stages of group development

- **Forming**: Establish the group
- **Storming**: Start to communicate their feelings
- **Norming**: Start to feel as a part of the team
- **Performing**: Works in an open, trusting atmosphere
- **Adjourning**: conducts assessment of the year

## ★ Team Role: A set of behaviors expected of a person occupying a certain position in a group

- Formal roles
- Informal roles

## ★ Belbin team role theory

- Thought focused roles
- People focused roles
- Action focused roles

## ★ Problems with roles

- **Role overload**: Stress builds when attempted to get more work done in less time
- **Role conflict**: members of a group have a different expectation of another's responsibility
- **Role ambiguity**: Role is left undefined, individual does not know what is expected from them
- **Rigidity**: Prevents flexibility and other potentials
- **Territoriality**: Reluctance to get help from others
- **Abdication**: Avoiding contributing within another's role just because it is someone else's responsibility
- **Human nature**: Habit of being unpredictable

## ★ Role re-delegation can be used to handle above problems with the aid of self-evaluation and personality testing.

## ★ A successful team

- Works together towards a common goal
- Mutual respect for members
- Diversity of member experience
- Individual communication style

# Team leadership

- ★ **Leadership:** Function of knowing yourself and having a vision that is well communicated
  - **Great man theories:** Leaders are born with qualities destined to lead
  - **Trait theories**
  - **Functional theories**
    - **Task:** goal setting, methods and processes
    - **Team:** Effective communication, clarify roles, team morale
    - **Individual:** Attention to behavior, feelings coaching
  - **Behaviorist theories:** Leader's behavior and actions rather than their traits and skills
  - **Contingency leadership:** Leadership style changes according to the situation
    - **Low competence/Low commitment:** DIRECTIVE
    - **Some competence/variable commitment:** COACHING
    - **High competence/variable commitment:** SUPPORTIVE
    - **High competence/high commitment:** DELEGATORY
  - **Transformational theory:** Leaders inspire individuals, develop trust, and encourage creativity and personal growth
  - **Ethical leadership:** 4 P's (Purpose, People, Planet, Probity)
- ★ **Key team leader responsibilities**
  1. Coordinate the team    **Encourage and motivate team**
  2. Provide structure    **set mission and purpose, clarify roles and responsibilities, allocate tasks**
  3. Clarify working methods    **practises and protocol**
  4. Focus on performance    **monitor performance, delegate and provide CPD sup**
- ★ A good leader will give credit to others when delegated responsibilities succeed and will accept the blame when delegated responsibilities fail.

Accountability - liable or answerable

Responsibility - give credits get blame(when delegated responsibility failed)

Authority - opinion and decision taking

cross functional team - less authority, hard to manage

# Decision making

★ **Decision making:** Cognitive process of reaching a decision. It is a logical and a systematic process.

★ 3 main areas that support systematic process

- **Environments for decision making (Features)**

- Attention incisive questions
- Equality feelings
- Appreciation information
- Encouragement place
- Diversity

- **Methods for decision making**

- Decision by consensus
- Decision by majority vote
- Decision by minority vote
- Decision made by an authority
- Decision by average individuals
- Decision by professionals

steps:

1. Identify and define the problem or decision to be made
2. Gather information and data relevant to the problem or decision
3. Identify possible alternatives or options
4. Evaluate the alternatives and their potential outcomes or consequences
5. Make a decision based on the evaluation of alternatives
6. Implement the decision and take action
7. Monitor and evaluate the results of the decision and adjust if necessary.

- **Tools for decision making**

- **Brainstorming:** list of ideas contributed by the members is used to make a conclusion
- **Affinity grouping:** Grouping unstructured ideas based on their natural relationship
- **Multi-voting:** Each member is given many votes
- **Criteria matrix:** List of values in rows and columns used to analyze data
- **Six thinking hats:** Looking at a decision from a range of different perspectives

Criteria	Weighting	OPTIONS					
		Option 1 JS		Option 2 VHT		Option 3 L	
		Score	Total	Score	Total	Score	Total
Criteria 1	1	1	1	5	5	5	5
Criteria 2	2	2	4	4	8	5	10
Criteria 3	3	3	9	3	9	5	15
Criteria 4	4	4	16	2	8	5	20
Criteria 5	5	5	25	1	5	5	25
TOTAL:			55		35		75



★ Advantages of team decision making

- Greater knowledge
- Shared responsibility
- Higher commitment

★ Disadvantages of team decision making

- Time consumption
- Less recognition
- **Conformity:** decision maker might not feel valued or respected



# Embracing diversity

★ **Team diversity:** The significant uniqueness of each individual on a team

- **Religion**

- Open up many view points for decision making
- Most challenging diversity aspect
- All employees must comply with the company policy regardless of the religion
- Encourage employees to accept differences
- Avoid overacting to simple things

- **Gender**

- Widen organization's talent pool
- Enhanced collaboration
- Improve staff retention
- Better understand customer needs
- Gender communication issues can affect the team interactions
- It can also lead to sexual harassments

- **Age**

- Different mindsets
- Increase flexibility
- Decisions are well rounded
- Importance of old workers
  - Dedicated
  - Punctual
  - Efficient
  - Good listeners
- Why young people are needed
  - New energy and perspective
  - Affordable
  - Tech advancement
  - Adaptability and agility

- **Culture**

- Refers to the standards of social interaction, value and beliefs from a group of people

- **Race**

- A group of people often of a common geographic origin.
- Racism is the belief that the inherited characteristics affect an individual's behavior

Benefits of diversity	Challenges of diversity
Creates innovation	Discrimination
Language skills are open doors for business	Absenteeism
Grows the talent pool	Conflicts in team members
Improves employee performance	Decrease in productivity

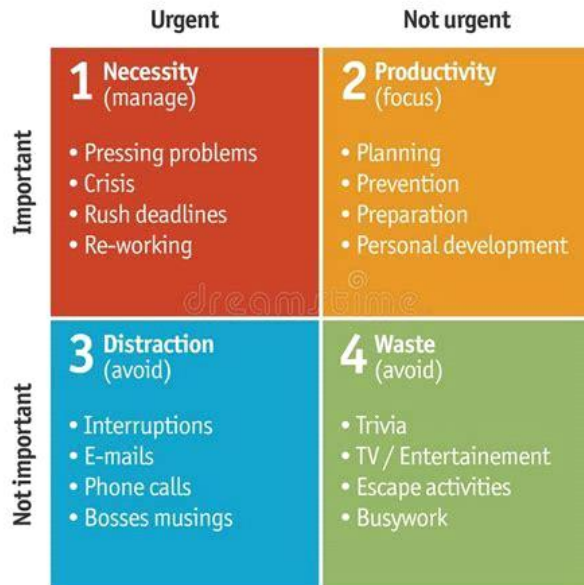
★ **How to overcome diversity issues**

- Planning and implementation of a proper diversity plan
- Conflict resolution skills
- Communication

# Time management

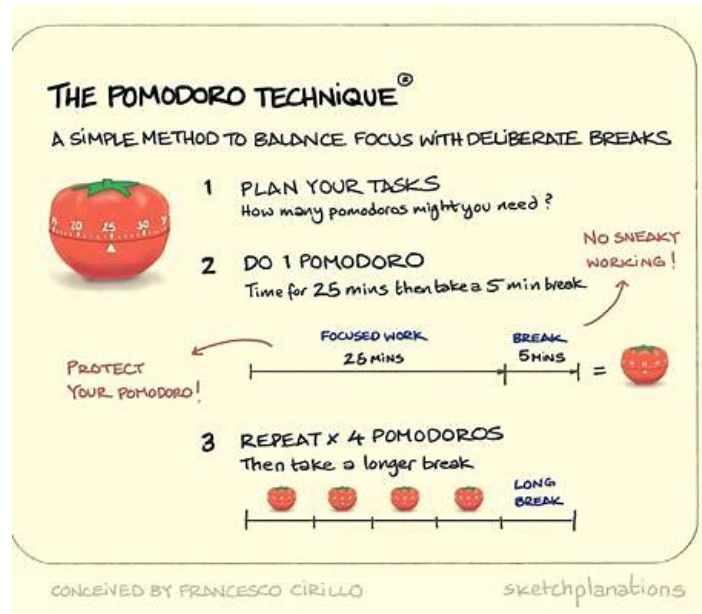
## ★ Tools for effective time management

- Online time tracking tools
- To do list
- Time management matrix
- Pomodoro technique
- Digital wellbeing



## ★ Preparation for time management

- Deep night sleep
- Balanced diet
- Daily exercises
- Organized environment
- Mindfulness



## DIGITAL WELLBEING





# Computing landscape

## ★ History of computers

- **Pre-Generation** (Before '40s) – Mechanical
- **First Generation** ('40s) – Vacuum Tube
- **Second Generation** ('50s) – Transistor
- **Third Generation** ('60s) – Integrated Circuits
- **Fourth Generation** ('70s) – Micro-processors
- **Fifth Generation** ('00) – AI

## ★ As time passed by, rapid advancements in computers (**PC, notebooks, wearable devices, embedded systems**) and computer components (**CPU, hard disk, memory, IO devices**) were results of technology advancements.

## ★ Today's computing landscape have connectivity to the digital world

- Internet
- Mobile phones
- Emails
- Social networks
- Online education
- Video sharing
- E-commerce

## ★ Areas of concern in current computer landscape

- **Ethical issues**
  - Intellectual property: intangible creations of humans
  - Information collection
  - Spam
- **Legal issues**
  - Intellectual property and licensing
  - Border between security and privacy
  - Cyber crimes
- **Social Issues**
  - Unemployment
  - Digital divide
  - Computerized customer service
  - Cyberbullying
- **Environmental issues**
  - E-waste
  - Energy for operation
  - Hard copies of documents



# Professional responsibilities and code of ethics

- ★ **Profession:** An area in the industry which requires specialized knowledge to work in
- ★ **Professional:** A person who is expertized in a certain field of study. They have special responsibilities
- ★ **Professionalism:** Qualities that is used to identify a profession / professional
  
- ★ Computing professional: Anyone who is employed in IT field
  - SW / HW designers
  - SW engineers
  - Database admins
  - SW managers
  - Computer scientists
  
- ★ Some computer systems can have direct life threatening impacts
  - Air traffic control systems
  - Mass transportation systems
  - Medical treatment systems
  - Nuclear reactors
  
- ★ **Ethics:** **A set of beliefs about right or wrong behavior**
  - Helps people to make moral decisions
  - Assumes that people are rational
  - Describes how people should act
  - **Professional ethics** cover issues involving employees, employers and other people
  - **Computer ethics** include social, political and personal issues
  
- ★ Codes of ethics relevant to some professional bodies like CSSL, IEEE
  - Professional development
  - Added value to Sri Lanka
  - Honesty
  - Accept responsibility when making decisions
  - Reject bribery on all forms
  - Avoid harm to others
  - Respect privacy of others
  - Honor confidentiality
  
- ★ Purpose of professional codes
  - 💡 These are often designed to motivate members of an association to behave in certain ways
  - 💡 Five primary functions of codes
    - Inspire
    - Educate
    - Guide
    - Responsibilities
    - Discipline in members
  
- ★ IT professionals need to commit to...
  - Integrity
  - Competence
  - Professional responsibility
  - Work responsibility
  - Societal responsibility



# Intellectual property

- ★ **Intellectual property** is an intangible human creation. It can include artistic works, symbols, names, images etc. It can also be defined as an intangible asset with exclusive ownership for a limited period of time.
- ★ IP assets can be owned / transferred / sold or licensed
- ★ Types of IP protection



Patents	Inventions e.g. a new form of jet engine	
Trademarks	Identify source of a product or a service e.g. logos	
Geographical Indications (GI)	product with unique geographical origin, such as Champagne	
Industrial Design	Ornamental or Aesthetic aspect of an article Eg: 3D shapes / 2D patterners	
Copyright	Expression of an Idea. Literary, artistic and scientific works e.g. books Related rights - Performances, broadcasts e.g. concerts	
Trade Secretes	Secret Information with commercial value	

- ★ What is the purpose of intellectual property system?
  - Enables people to earn recognition for their creation
  - Enables to earn a financial benefit
  - Creates an environment for creative thinkers to create new innovations
- ★ A **patent** is a legal certificate that gives you the right to protect your invention for a specific time period in a specific region
  - 3 principal requirements of a patent
    - **Novelty**: New characteristic which was not known to the public
    - **Utility**: Invention needs to be able to be used by the industry
    - **Non-obviousness**: invention should not be obvious

- **Why** file a patent application
  - To get exclusive control in the market for your product (TO prevent creating knockoffs)
  - Patent can be transferred or sold
  - To attract investors and funding
  - To obtain recognition

- **What** cannot be patented?
  - Mathematical formulae
  - Natural phenomenon
  - Laws of nature

- **Who** has the right to patent
  - Inventor, Employee, contractor

- **When** to file the patent application
  - As soon as you come up with the inventor

- **Where** to file the patent application
  - File a national application in national office
  - File a regional application in the regional office
  - File an international application using the PCT



### ★ Licensing of IP

- A permission that an IP owner grant to another person to use the IP under certain conditions
- Ownership is still with the original owner
- Licensing creates an income source
- Creates a market presence for the technology

### ★ Software piracy

- Unauthorized and illegal duplication of copyrighted software
- Soft lifting
- Client-server overuse
- Internet piracy
- Hard-disk loading
- Software counterfeiting

### ★ Fair use

- Copyright law protects certain exclusive rights of copyright holders

### ★ Open source software

- Source code is freely available to the public
- New versions appear much more quickly
- Anyone can make money by providing support

### ★ How to protect the intellectual property?

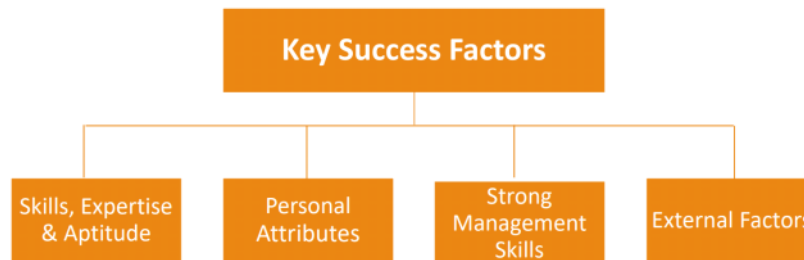
- Register the appropriate IP protection
- Trademark registration
- Patent
- Registering the copyright



# Entrepreneurs

- ★ **Entrepreneurs** are people with the ability to create a new business where none existed before. **Entrepreneurship** is the process of designing, launching and running a new business.
- ★ **Value proposition:** Should clearly explain how a product fills a need, communicate the specifics and the reason why it is better than the similar products on the market

## Key Success Factors



### ★ Skills, Expertise and aptitude

- **Skills**
  - Refers to manual work like electrician, hairdresser
- **Expertise**
  - Based on the knowledge you obtained by studying / experience
- **Talents**
  - What you are born with

### ★ Personal Attributes

Successful	Unsuccessful
Creative and innovative	Low work ethic
Create new products	Poor money managers
Strong money management	Failure to plan
Hard working and disciplined	Afraid to take risks
Take responsibility for own actions	Less motivation

### ★ External factors (PEST analysis)

- **Political**
  - Gov. policies
  - Pressure groups
  - Wars and conflicts
- **Economic**
  - Home economic situations/trends
  - Interest/exchange rates
  - Taxation
- **Social**
  - Lifestyle trends
  - Consumer opinions
  - Media news
  - Demographics
  - Role models
- **Technological**
  - Intellectual property issues
  - Competing technologies
  - Innovation potential
  - Research funding

### ★ Strong management skills

- Time management
- Employee management
- Customer management
- Sales management
- Financial management
- Business management

## Business Model Canvas



# Laws related to ICT

- **Computer related offences**
  - Computer related frauds
  - Theft of information
  - Forgery
  - Identity theft
  - Phishing
  - Cyber squatting
- **Content related offences**
  - Illegal content
  - Infringement of right to privacy
  - Infringement of freedom of expression
- **Computer integrity offences**
  - Unauthorized access
  - Unauthorized acts
  - Unlawful devices

Only the needed information is included. There may be errors as I'm not an expert.