

Name _____ Final Review - Section 3 Final Exam

Engineering Technology
Product Development

Macomb Community College

Design Communications

'Exam Cover Page'

Please sign 'Honor Pledge' after taking exam:
"I have neither given nor received aid on this exam"

(Signature Required)

Please print all answers

Final Review - Section 3

Meetings are effective because:

- The **written word only carries 7%** of the true meaning and feeling
- **Telephone conferences convey 38%** of the true meaning and feeling
- **The other 55% of meaning and feeling is carried in facial expression and non-verbal signals**

That is why meetings are so effective.

Source: Statistic from research by Dr. Albert Mehrabian

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When to have a Meeting?

First, before scheduling any meeting,
determine if a phone call or conference call can
replace the need for a meeting

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Tips for Technology-Enabled Conferences:

- **Set an agenda in advance**
- **Choose a time that considers all participant time zones**
- **For initiating calls, insure you know how system works in advance**
- **Identify yourself by name and ask for names participating**
- **Establish order for responses at beginning of meeting**
- **Pre-arrange for how to handle folks who become disconnected**
- **Stick to the agenda and End on time**

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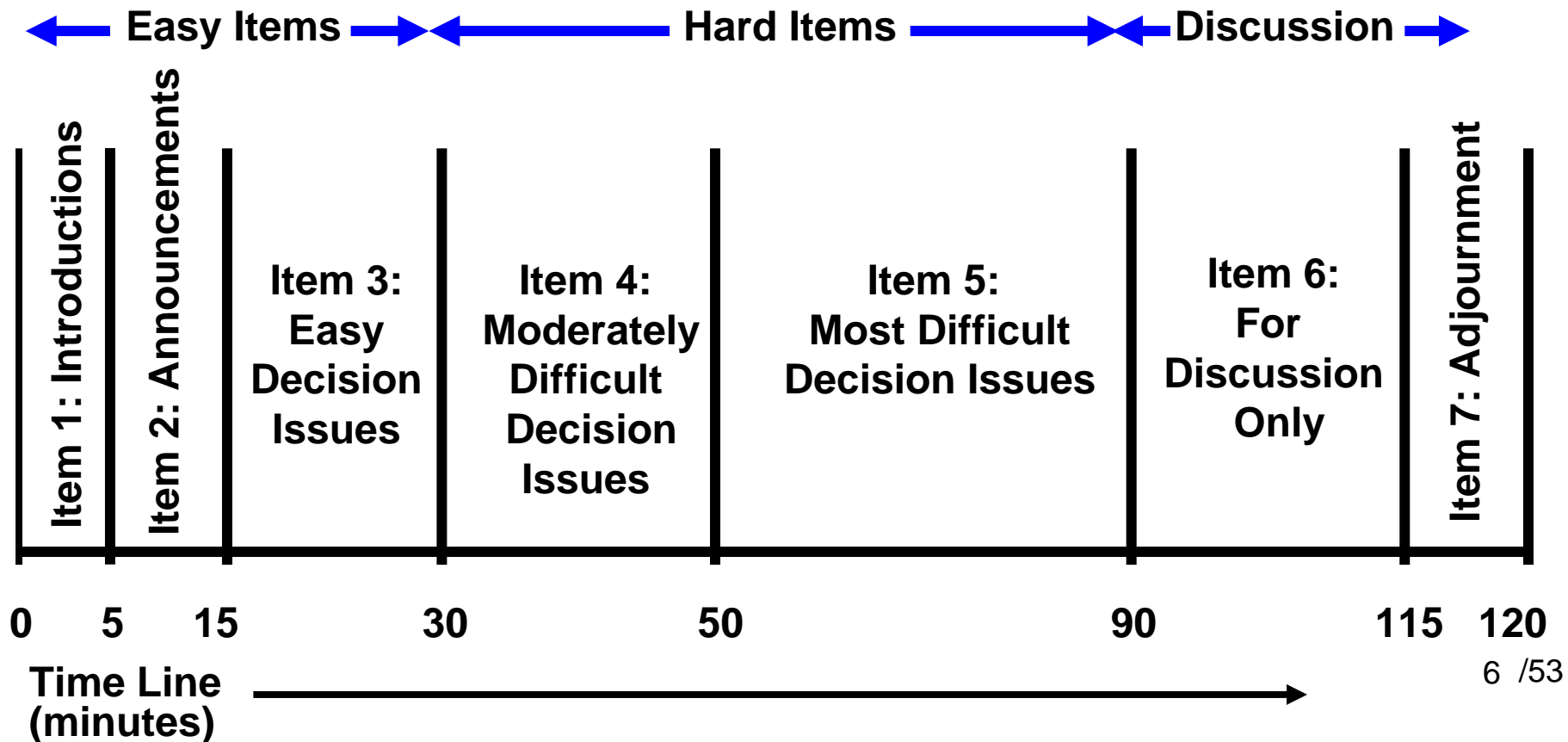
Setting an Agenda:

- **Most important aspect of a well-managed meeting
(No agenda, No meeting)**
- **Defines purpose and outcomes of meeting**
- **Defines structure and time management**
- **List topics, presenters, and allotted time**

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The Agenda Bell: **Middle 1/3 has Quality of:**

- Attendance
- Attention
- Physiological Alertness
- Psychological Focus



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Summary:

Meetings - are effective because the other 55% of meaning and feeling is carried in facial expression and non-verbal signals

Meeting Needed - to managing projects, people, clients, when e-mail traffic get complicated, or when problems arise

Invitees - based on whose input is needed as determined by scope and subject to be covered

Meeting Preparation – no matter how informal the meeting, preparation in advance can improve the effectiveness of the meeting

Agenda - defines purpose and outcomes of meeting; Lists topics, presenters, allotted time, location and date

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Summary:

Outcomes – decisions, discussion, information, planning, generate ideas, feedback, agreement and solutions

Location - nature of meeting and participants dictate location, insuring room is right size to accommodate participants

Facilitator's Role - keeps meeting on schedule, helps group reach consensus based solutions and summarizes action items at end of discussion and meeting

Meeting Ending - facilitator summarizes decisions agreed to, lists next steps (if any) and reviews assigned action items and owners

Meeting-After-The-Meeting - don't be in a hurry to vacate conference room, keep ears open for behind the scene discussions and seek feedback

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Gaining Agreement: 'Outline Areas of Agreement'

- Divide a chart into two columns
- Write on one side what people agree on;
Write what people disagree about on the other side
- See if differences are important to the team's work.
If yes, develop a plan to resolve them. If not, move on

<u>Agree</u>	<u>Disagree</u>
-Xxx	-Yyy
-Aaa	-Bbb
-Mm	- Nn

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Reaching Consensus:

- Requires considering the ideas, feeling and situations of **all team members**, not just a few or majority
- Usually **takes a lot of discussion time and requires skills to resolve differences of opinion**
- **Usually results in smoother implementation**
- **Is important in complex/ important decisions requiring the coordination and understanding of all team members**
- **Any team member can block a decision**. However, they **must provide a reasonable and timely alternative**. If no alternative is forthcoming, the **blocker must re-evaluate their position**.

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Guidelines for Consensus:

- **Listen**, pay attention to others
- Encourage participation
- **Share information**
- **Don't agree too quickly**
- Don't bargain or trade support – that's compromise
- **Don't vote** – unless just to narrow the choices
- Avoid arguing blindly for your own views
- Treat differences as a strength
- **Create a solution that can be supported by all**

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Summary:

Gaining Agreement – separate the people from the problem; focus on interests, not positions; use objective criteria

Group Think – ideas accepted w/o careful review, everyone goes along

Good Decisions – best if supported by the people affected by it and based on facts and data, not opinions

Voting – is easy and familiar but may leave ‘losers’ out and be more difficult to implement

Consensus – finding an option that all team members will support, reached fairly and openly; best solution for us at this time

Final Review - Section 3
7 Habits

'7 Habits' Purpose: To lead your life in a truly effective way

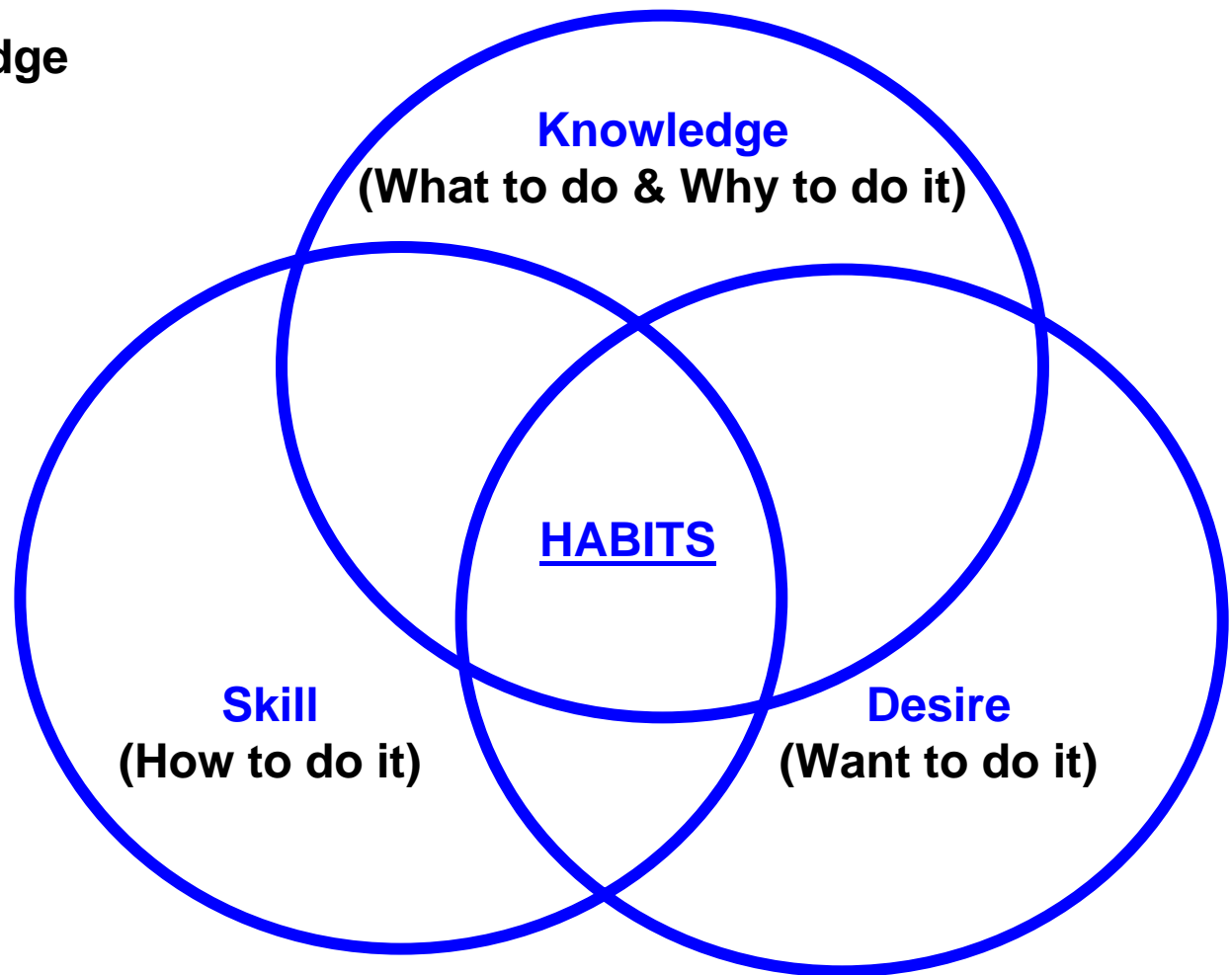
You can expect to:

- **Achieve personal and professional goals**
- **Develop better working relationships**
- **Improve listening skills**
- **Become more effective**
- **Increase self-esteem**

Final Review - Section 3
7 Habits

Developing Habits are defined as the intersection of:

- Knowledge
- Skill
- Desire



Final Review - Section 3
7 Habits

Personal Ethic Concern:

Again, the problem with relying on **Personality Ethic** is that we **see the world based on our perspective** which can have a significant impact on how we perceive things.

Unless the basic underlying 'paradigms' are right, *simply changing outward behavior is not effective*

If we **want to *become more effective*** (i.e. getting what you want), then we must consider a **personal paradigm shift in basic Character behavior.**

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7 Habits

Summary: The 7 Habits are based on a new level of thinking

- **Habits** – are consistent, often unconscious patterns, which constantly **express our character and produce our effectiveness, or ineffectiveness**
- **Developing Habits** - requires the **three components knowledge** (what to, who to), **skills** (how to) and **desire** (want to) to make a new Habits
- **Paradigm** - a frame of reference that provides the way we see the world in terms of perceiving, understanding and interpreting
- **Paradigm Shift** – a change in thinking that comes when we gain additional information and understanding; a means to **achieve quantum changes in our lives**

Final Review - Section 3

7 Habits

Summary (cont.): The 7 Habits are based on a new level of thinking

- **Principles** – fundamental truths which are **guidelines for human conduct that are proven to have enduring, permanent value**
- **Values** - the **self chosen worth or priority we place** on people, things, ideas, or principles
- **Character-Based** – based on the fundamental idea that there are **principles that govern human effectiveness**; ‘Demonstrated over time and often under stress’
- **Inside-Out** - means that the **changes start within oneself**.
- **Emotional Bank Account** – *a metaphor* for the amount of **trust in a relationship**; deposits and withdrawals are the only thing we can control in a relationship

Final Review - Section 3
7 Habits Overview

Dependence – the paradigm under which we are born and rely upon
others to take care of us

Independence – the paradigm under which we can make our own
decisions and **take care of ourselves**

Interdependence – the paradigm under which we cooperate to achieve
something that **cannot be achieved independently**

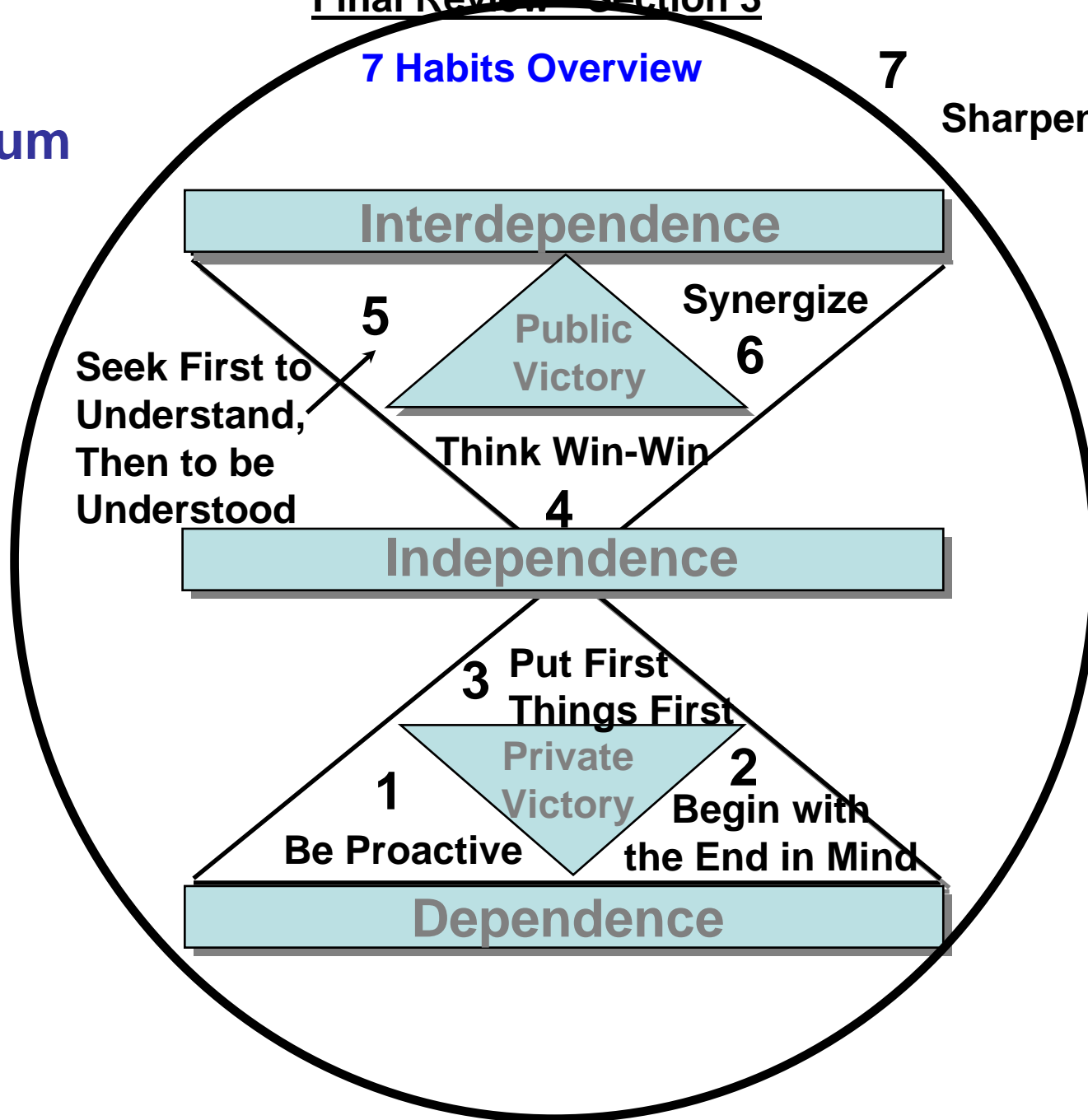
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**Maturity
Continuum**

7 Habits Overview

7

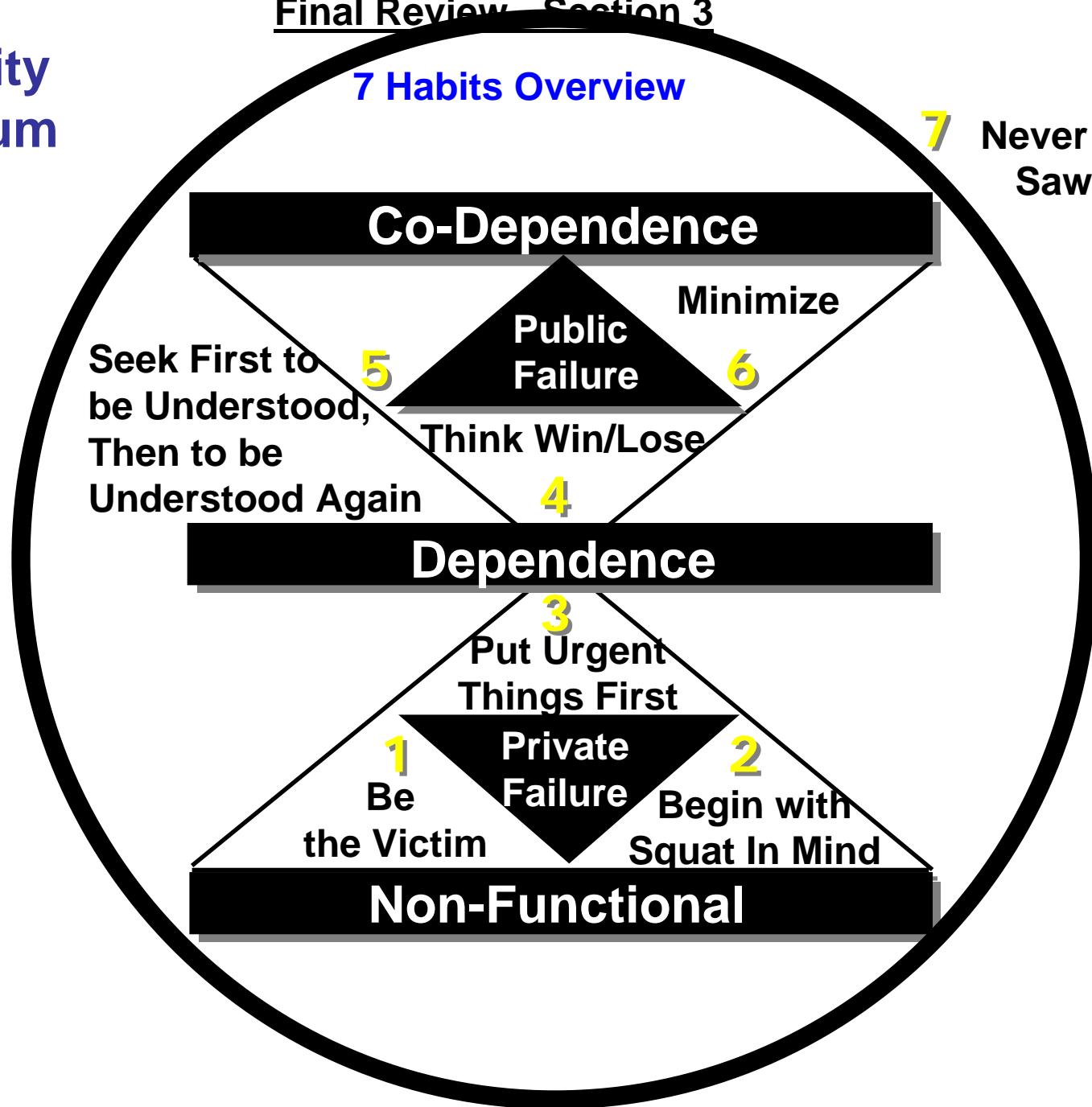
Sharpen the Saw



Immaturity Continuum

7 Habits Overview

7 Never Stop Sawing



Final Review - Section 3
Habit #1: Be Proactive

Principles of Personal Vision:

Three theories of determinism to explain the nature of man:

- **Genetic Determinism** – holds that you *inherit* your personal tendencies and character (Grandparents did it to me)

- **Psychic Determinism** – holds that your *upbringing and childhood* experiences mold you (My parents did it to me)

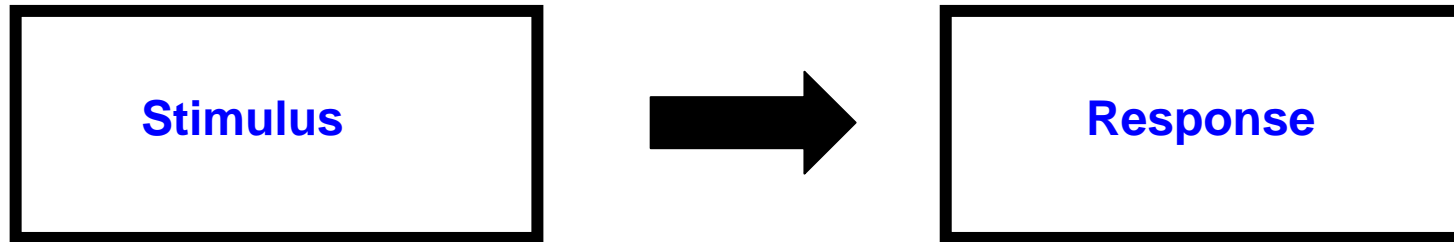
- **Environmental Determinism** – holds that *environmental factors* are responsible for your situation (My spouse, boss, economy did it to me)

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Habit #1: Be Proactive

So What?

Each of these theories is based on the 'Stimulus/Response' theory:

This is the basic idea that we are **conditioned to respond in a particular way to a particular stimulus.** (i.e. Pavlov's dog experiments)



Reactive Behavior:

Reactive people allow outside influences to control their responses.

Examples:

Get hit

Get yelled at

Get cut off

Hit back

Yell louder

Closer the gap
or road rage....

Final Review - Section 3
Habit #1: Be Proactive

He found that man had the **Freedom to Choose** his response and that this proactive choice of attitude is **'the last of the human freedoms'**.



Proactive Behavior:

Proactive people use the margin of freedom to make choices that best apply their values.

Final Review - Section 3
Habit #1: Be Proactive

Characteristics of a Proactive Person:

- Respond according to **values**

- Accept responsibility for their **own behavior**

- Focus on their **Circle of Influence**

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Habit #1: Be Proactive

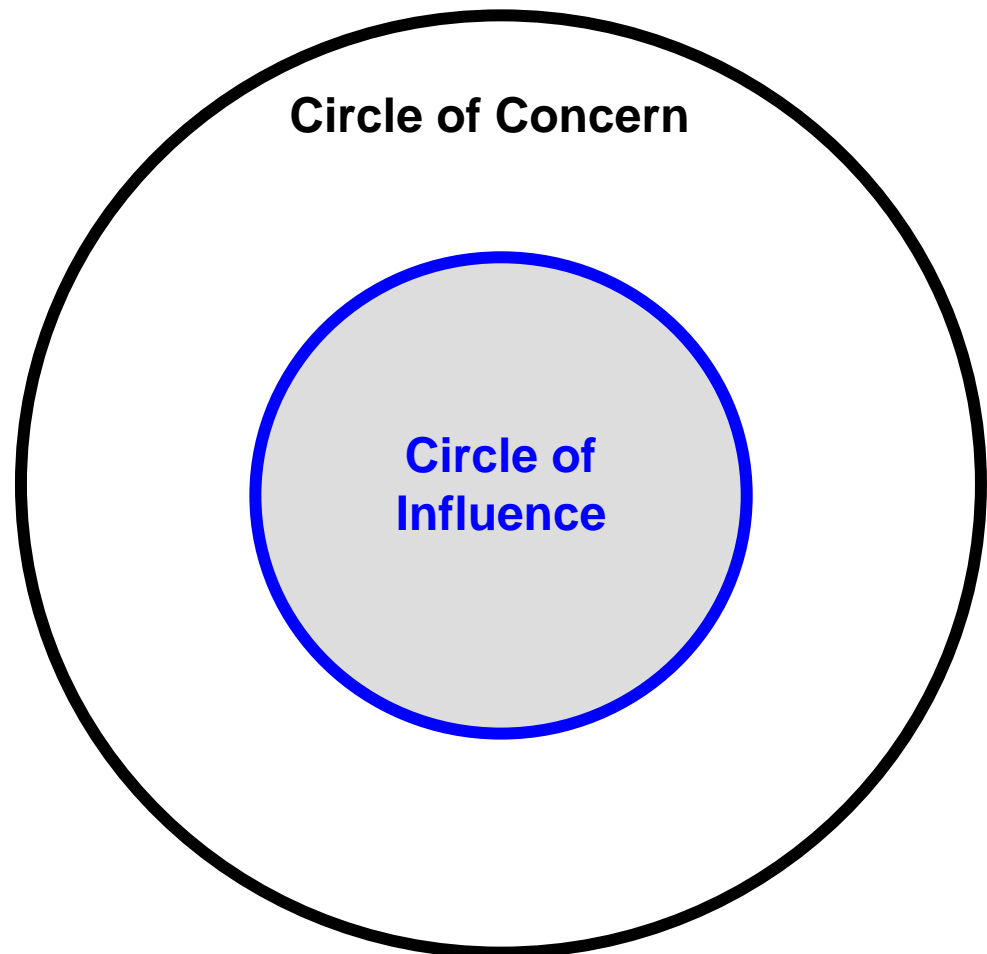
Where do you focus your time?

Circle of Concern

- Those things of which we *have no control over*
 - National debt
 - Nuclear war
 - National hunger
 - Other people's behavior

Circle of Influence

- Those things of which we *have control over*
 - Feelings
 - Exercise
 - Job performance
 - Education



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Habit #1: Be Proactive

Summary:

- **Determinism** - a theory that acts of the will are causally determined by preceding events or natural laws
- **Freedom to Choose** – the proactive choice of attitude which is ‘the last of the human freedoms’.
- **Proactive Behavior** - proactive people use the margin of freedom to make choices that best apply their values

Final Review - Section 3
Habit #1: Be Proactive

Summary:

- **Circle of Concern** - those things of which *we have no control over*
- **Circle of Influence** - those things of which we *have control over*

Habit 1: Be Proactive – *individuals are responsible* for their own choices and have the *freedom to choose* and improve their lives through the *things that they can influence* rather than by simply reacting to external forces

Final Review - Section 3
Habit #2: Begin with the End in Mind

Beginning with the in end mind is the process of re-scripting:

All things are create twice –

- **First, the mental thought and plan for desired results**
- **Second, the actual work to bring them into physical existence**
- **We write and re-write our scripts with our imagination and conscience**
- **Most endeavors that fail, fail with the first creation**

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Habit #2: Begin with the End in Mind

Summary:

- **Leadership** – what do I/we want to accomplish?
- **Management** – how can I best accomplish it?
- **Productivity** – doing it
- **Personal Mission Statement** - clarifies what is really important to you; provides the mental roadmap for the desired results for your life

Final Review - Section 3

Habit #2: Begin with the End in Mind

Summary:

- **A Principle Center** - lives which are **centered on the correct principles** and deep fundamental truths (i.e. fairness, integrity, honesty, service, excellence, patience, trust, etc.)

Habit 2: Begin with the End in Mind – to create a **mental vision before beginning any activity**; applied to the end of life images as the frame of reference by which everything else is measured

Final Review - Section 3
Habit #3: Put First Things First

The Time Matrix:

		Urgent	Not Urgent
Important	I – Necessity	<ul style="list-style-type: none"> • Crises • Pressing problems • Deadlines-driven projects, meetings, preparations 	<ul style="list-style-type: none"> • Preparations • Preventions • Value clarification • Planning • Relationship building
	Not Important	III – Deception	IV – Waste & Excess
	<ul style="list-style-type: none"> • Interruptions • Some mail/reports • Many pressing matters • Many popular activities 	<ul style="list-style-type: none"> • Trivia, busywork • Some phone calls • Time wasters • ‘Escape’ activities • Irrelevant mail 	

Final Review - Section 3
Habit #3: Put First Things First

The Time Matrix:

So how much time should be spent in each quadrant?

		Urgent	Not Urgent
Important	I – Necessity 25-30% 20-25%	II – Effectiveness 15% 65-80%	
	Not Important	III – Deception 50-60% 15%	IV – Waste & Excess 2-3% less than 1%

Typical Organizations

High Performance Organization 32 /53

Final Review - Section 3
Habit #3: Put First Things First

Summary:

- **Clock** - represents 'How fast you're going'; what we do with and how we manage our time (Commitments, appointments, schedules activities)
- **Compass** - represents 'Where you're headed'; what we feel is important and how we lead our lives (vision, values, principles, mission, direction)
- **Fourth Generation of Time Management** - focuses on **effective, synergistic interaction with people** rather than the efficient, mechanical management of 'things'; knowing and doing *what is important* rather than simply responding to what's urgent
- **Reality of 'true north' Principles** - a *metaphor for principles* which define where **we are**, where we **want to go**, and **how to get there** that are **essential to cultivating a quality life.**

Final Review - Section 3
Habit #3: Put First Things First

Summary:

- **Quadrant I – Crisis Management** - Where we manage, produce and bring our experience and judgment to bear in **responding to many needs and challenges**
- **Quadrant II – Personal Leadership** - Where we do long range planning, anticipate and prevent problems, empower others, broaden our minds and increase our skills and invest in relationships
- **Quadrant III – Deception** - Noise of urgency create illusion of important; **actual activities are only important to someone else**
- **Quadrant IV – Waste** - **Time wasters**

Habit 3: Put First Things First - focus on **important items instead of urgent ones**; things that matter most should never be at the mercy of things which matter least

Final Review - Section 3
Habit #4: Think Win-Win

Summary:

- **Win-Win: Principle-based behavior - take time to search for solutions that will make them happy and simultaneously satisfy others**
- **Win-Lose: Competitive Paradigm - achieve success at the expense or exclusion of another's success; promotes unhealthy competition**
- **Lose-Win: 'Doormat' Paradigm - choose to lose and let others win shows high consideration for others**
- **Lose-Lose: Adversarial Conflict – nobody wins; low on courage and consideration; envy and criticize others**
- **Win: Win at All Costs - think only of getting what they want; are personally set on winning**
- **Win-Win or No Deal: Highest Form of Win-Win - seek first for Win-Win, If unable to find acceptable solution, agree to disagree**

Final Review - Section 3
Habit #4: Think Win-Win

Summary:

- **Abundance Mentality** – believes there is **plenty for everyone**
- **Scarcity Mentality** – believes that when **someone else wins, they lose**

Habit 4: Think Win-Win – seek **agreements and relationships which are mutually beneficial**; if Win-Win can not be achieved, ‘no deal’ may be the best alternative

Final Review - Section 3

Habit #5: Seek First to Understand, Then to be Understood

What it means:

- **Diagnosis must precede prescription**
(i.e. amateurs sell products, professionals sell solutions)
- Take the time to **deeply understand the problems** presented to us
- Understanding comes from listening
- **Put ourselves in the perspective of the other person**

Final Review - Section 3

Habit #5: Seek First to Understand, Then to be Understood

Empathic Listening involves four development stages:

1. **Mimic Content** – least effective, repeating what the person said back to them
2. **Rephrase the Content** – more effective, putting the person's meaning in your own words (logical approach)
3. **Reflects Feeling** – involves the right brain, emotional level
4. **Rephrase the Content and Reflect the Feeling** – include both 2nd and 3rd, attempting to understand both sides of his communication
5. **Sometimes talking isn't necessary; the words may get in the way**

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Habit #5: Seek First to Understand, Then to be Understood

Consider:

All the well meaning advice in the world won't amount to a hill of beans if we're not addressing the real problem. And we will **never get to the real problem if we can't see the world from another point of view.**

Children will open up to their parents if they feel their parents will **love them unconditionally and will be faithful to them afterwards, **never ridiculing them.****

Empathic listening takes time, but not as much time as backing up and correcting a misunderstanding.

Final Review - Section 3

Habit #5: Seek First to Understand, Then to be Understood

Summary:

- **Empathic Listening** – Listening and responding with the intent to understand the **other person's frame of reference and feelings**
- **Autobiographical Responses** - from the perspective of our own paradigms

Habit 5: Seek First to Understand, Then to Be Understood – effective listening is not simply echoing what the other person has said, it is **putting oneself in perspective of the other person**; listening empathically for both feeling and meaning

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Habit #6: Synergize

Fishing for the Third Alternative:

- The 'middle' way may not be compromise, but a **Third Alternative**

- By mutually seeking to understand and be understood, the participants work together to create a Third Alternative

- **Seeking a Third Alternative is a major paradigm shift from the traditional 'either/or' mentality**

- Each participant **gets what they want** and **build better relationships** in the process

Final Review - Section 3
Habit #6: Synergize

Ground Rules for Synergizing:

- Prepare to find **a solution that is better** than what either person presently has in mind

- **Recognize other's opinions**, viewpoint and perspectives as helpful when seeking solutions

- Restate the other person's point to their satisfaction before you make your point

- **'Release the Outcome'** - keep minds, hearts and expressions open to new possibilities

Final Review - Section 3
Habit #6: Synergize

Summary:

- **Compromise** – two or more people **settle for less than they want** so some of each of their wants can be satisfied
- **Valuing the Differences** - to value the mental, emotional and psychological differences between people **is the essence of synergy**; the real strength of any relationship is **having alternative points of view**

Habit 6: Synergize – the principle that the **whole is greater than the sum of the parts**; when two or more people work together to understand something, they **derive solutions more powerful than would be achieved otherwise**

Final Review - Section 3
Habit #7: Sharpen the Saw

The **only constant in life is change** (and perhaps taxes).

- People can not live with change if they have a changeless core inside them

- Whatever is at the center of their lives will be the source of their:
 - Security – sense of worth
 - Guidance – source of direction
 - Wisdom – perspective in life
 - Power – capacity to act

Always remember that while you can change w/o improving, you can not improve w/o changing

Final Review - Section 3
Habit #7: Sharpen the Saw

Sharpen the Saw:

When people get busy producing or 'sawing', they rarely take time to Sharpen the Saw because maintenance seldom pays dramatic, immediate dividends

Remember:

**It is the Law of the Harvest –
'We reap what we sow'**

Final Review - Section 3
Habit #7: Sharpen the Saw

Summary:

- Sharpening the Saw means **maintaining and improving the things that help us accomplish our work and other desires**
- To sharpen the Saw, **make gradual changes** from day to day
- **Regular exercise, study and practice will improve the mind, body and spirit**
- The spiritual dimension is our **source of meaning and purpose**
- The social dimension is a challenge to our proactively

Final Review - Section 3
Habit #7: Sharpen the Saw

Summary (cont.):

Habit 7: Sharpen the Saw – the principle of **continuous improvement** in the physical, mental, spiritual and social/emotional dimensions; the **Habit of self renewal**

Final Review - Section 3

History of Project Management:

Prior to the 1950's,

- Projects were managed on an ad hoc basis using mostly Gantt charts and informal techniques and tools



Gantt Chart

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History of Project Management (cont.):

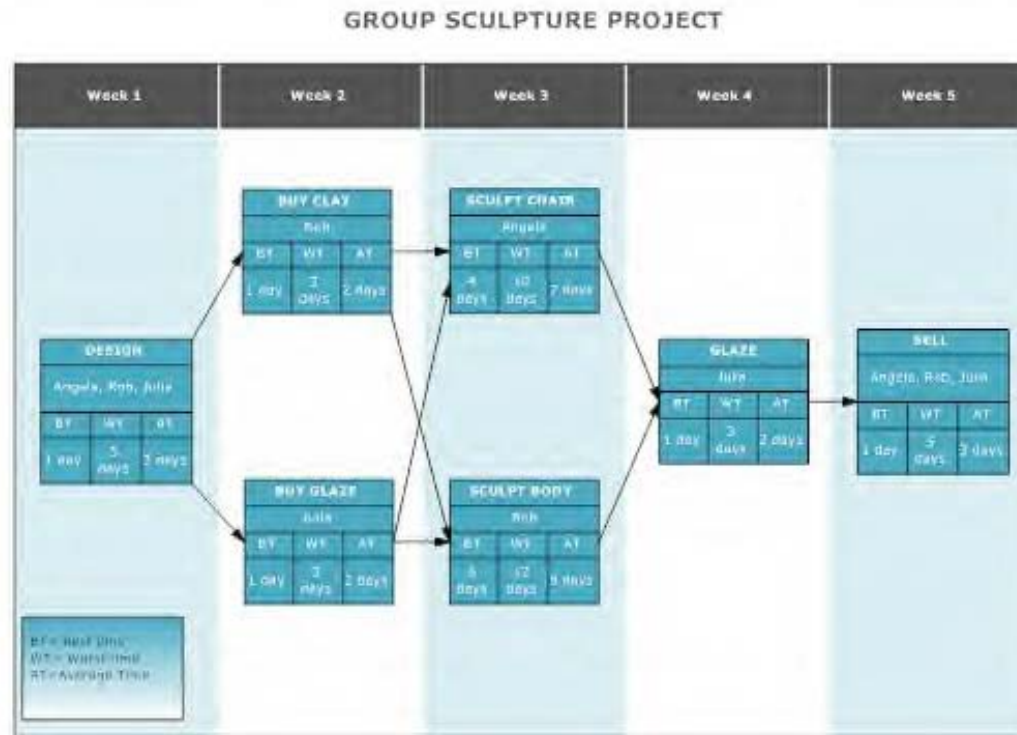
During the 1950's,

Two new mathematical project scheduling techniques were developed:

1. **Program Evaluation and Review Technique (PERT)** – developed as a part of the Navy's Polaris missile submarine program

Time By Weeks

Tasks By Function
(with links)

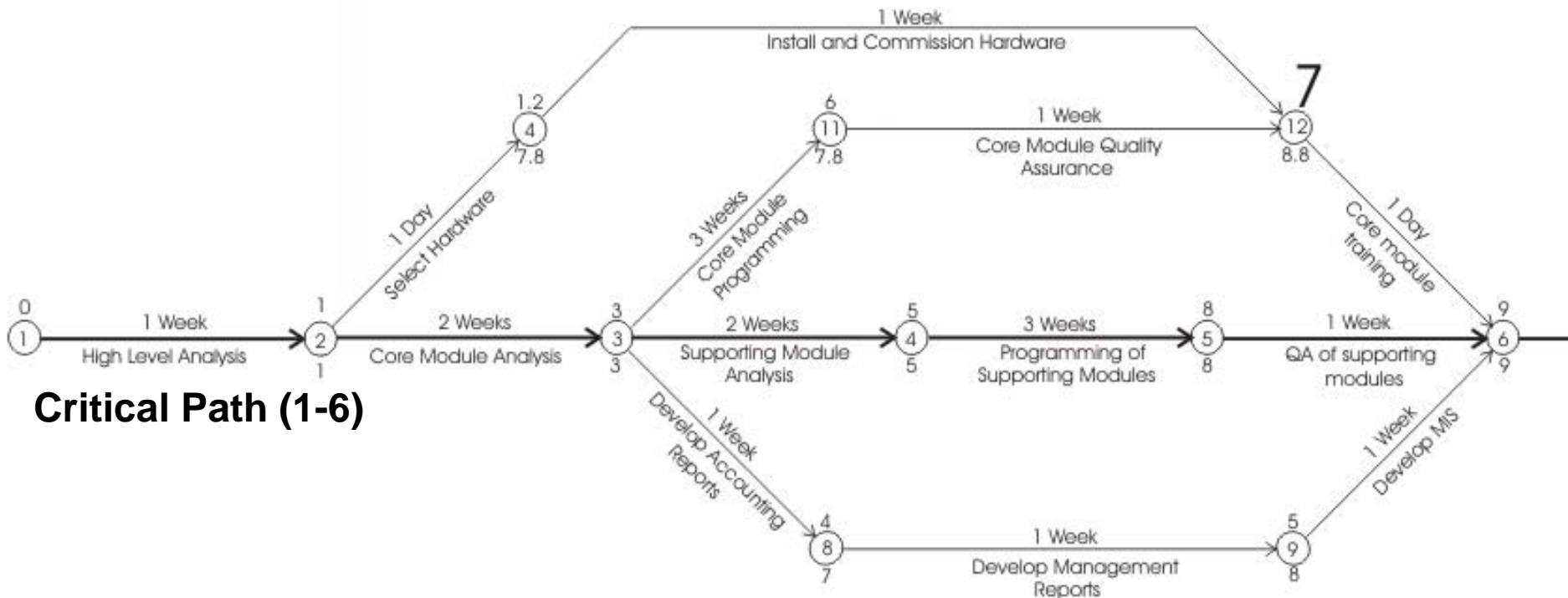


PERT Chart

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History of Project Management (cont.):

2. **Critical Path Method (CPM)** – developed by DuPont and Remington Rand Corporation for managing plant maintenance projects



Final Review - Section 3 Project Management

The Traditional Triple Constraints:

- **Time** – the **time available** to complete the project
- **Cost** – the budgeted **amount of resources available** for the project
- **Scope** – defines **what must be achieved** to produce the project's end result (including quality performance)

The discipline of project management is about providing the tools and techniques that enable the project team to organize their work to meet these constraints.

Final Review - Section 3

Project Management

Summary:

- **A Project** - is an endeavor undertaken to create a unique product or service which follows a carefully selected set of activities chosen to use resources to meet the pre-defined objectives
- **Project Management** - ensures that a project is delivered within the defined constraints; Optimizes allocation and integration of the resources needed to meet those pre-defined objectives
- **Project Manager** - has overall project management responsibility and is responsible for insuring project is completed according to requirements

Final Review - Section 3

Project Management

Summary (cont.):

Project Five Phases:

1. **Initiation** – determines the nature and scope of development; Defines the goals and scope in writing; Assembles the team
2. **Planning and Design*** - translates the goals into specific tasks, creates a plan to complete those tasks and create the design
3. **Execution*** - starts the project off on-time; Reviews the work plan and specific assignments; Implements the design, solves the problems and meets the due dates
4. **Controlling*** - monitors project performance (on-track, on-time, and on-budget); Make corrections to the schedule to respond to problems or adjusts expectations and goals
5. **Closing** - insures all requirements have been validated and met; Insures all documentation is completed and signed-off

* = Note: Steps 2, 3 and 4 are not sequential and that many industries utilize variations on these stages