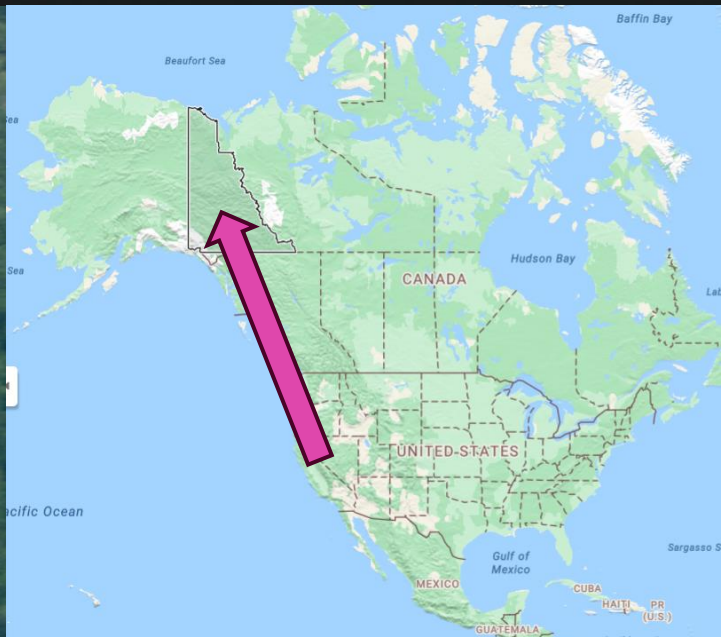
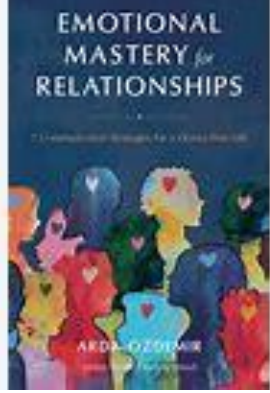


EBLC 1/25/2025 Agenda

- ▶ Recap and Discuss Module 1 Reflections and your insights
- ▶ Discuss self-directed research project topic ideas and generative AI countermeasures
- ▶ Communicating with Levels of Abstraction
- ▶ Product management responsibilities & interactions
- ▶ Roles of lawyers, businesspeople, and engineers
 - ▶ Professional success traits and strengths
- ▶ Exercise: designing your organization
- ▶ Team formation
- ▶ Review fact pattern 1

AVAILABLE LIGHT FILM FEB 9TH - 19TH WHITEHORSE, YUKON FESTIVAL





What is your toothpaste?

Next class

- ↴ Discuss reflections
- ↴ Form teams
- ↴ Start simulation / fact pattern
- ↴ Lecture on Roles of Businesspeople, Engineers and Lawyers
- ↴ Discuss self-directed research project topic ideas and generative AI countermeasures



EBLC – Module 2

How Engineers, Businesspeople and Lawyers Communicate With Each Other

SPRING 2025

Agenda

- ▶ Recap and Discuss Module 1 Reflections and your insights
- ▶ Discuss self-directed research project topic ideas and generative AI countermeasures
- ▶ Communicating with Levels of Abstraction
- ▶ Product management responsibilities & interactions
- ▶ Roles of lawyers, businesspeople, and engineers
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- ▶ Review fact pattern 1

What is StrengthsFinder 2.0?

- ▶ A study that identifies the strengths, unique talents and the area of best potential growth opportunities for an individual based on a personalized report of them.
- ▶ *“You cannot be anything you want to be - but you can be a lot more of who you already are.”*

References: StrengthsFinder 2.0 By Tom Rath; Now, Discover Your Strengths By Marcus Buckingham and Donald Clifton



Success is achieved when we focus on opportunities that allow us to further the areas of our *strengths* and enable us to improve our areas of *weakness*

$$\text{Strength} = \text{Talent} + \text{Knowledge} + \text{Skills}$$

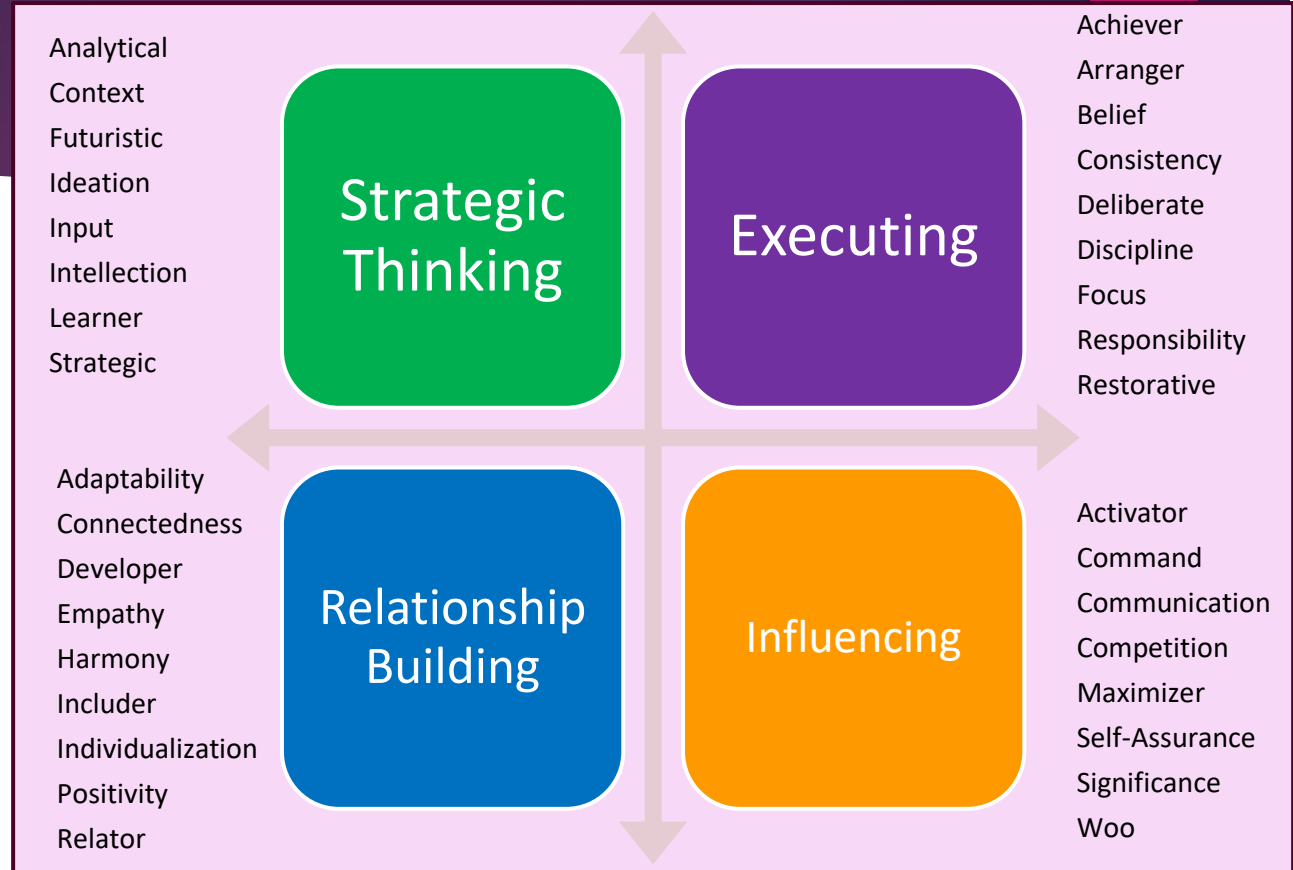
Talent is the natural aptitude resident in an individual

Knowledge is the facts, information, and awareness gained through experience and/or education

Skills represent the ability to use one's knowledge in a particular area to effectively execute on a task

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What Are The Domains Of Strength?



Examples

Jennifer	
Strengths	Quick Quotes
Harmony	Looks for consensus
Communication	Putting thoughts into words
Maximizer	Focus on strengths to stimulate folks
Positivity	Contagious enthusiasm
Learner	I have to constantly educate myself
Sudha	
Strengths	Quick Quotes
Strategic	Create alternative ways to proceed when facing challenges
Achiever	Take great satisfaction from being busy and productive
Arranger	Figure out how all of the pieces and resources can be arranged for maximum productivity
Relator	Enjoy close relationship with others to achieve a goal
Developer	Recognize and cultivate the potential in others

Jeff	
Strengths	Quick Quotes
Strategic	Sort through the clutter – find the best route
Learner	Desire to learn and continuously improve
Activator	“When can we start?”
Achiever	Explains your drive
Futuristic	“Wouldn’t it be great if...”

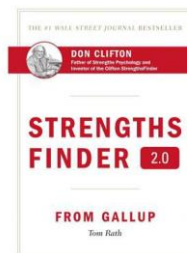
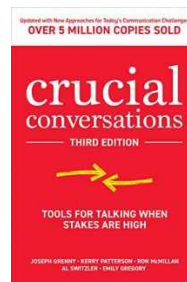
Paul	
Strengths	Quick Quotes
Achiever	Explains your drive
Futuristic	“Wouldn’t it be great if...”
Woo	“I really love interacting with people”
Strategic	Sort through the clutter – find the best route
Ideation	“join the dots” thinking



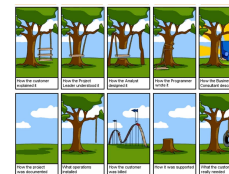
- Strengths
- Communication/collaboration skills
- Language (systems, security, privacy)
- Roles and organizational structure
- Incident response plan
- Training
- Toothpaste

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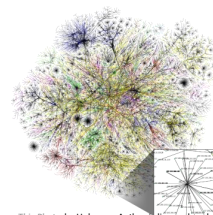
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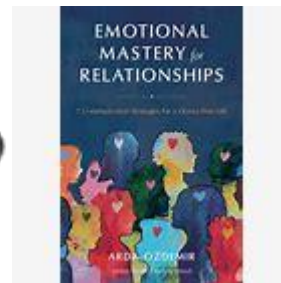
Product Manager	Product Owner
<ul style="list-style-type: none"> Market/Customer facing. Identifies market needs. Collocated with marketing/business. Owns vision and roadmaps, program backlog, pricing, licensing, ROI. Drives PI objectives and release content via prioritized features and enablers. Establishes feature acceptance criteria. 	<ul style="list-style-type: none"> Solution, technology, and team facing. Collocated with team(s). Contributes to vision and program backlog. Owns team backlog and implementation. Defines iterations and stories. Accepts iteration increments. Drives iteration goals and iteration content via prioritized stories. Establishes story acceptance criteria, accepts stories into the baseline.



credited to Alex Gorbachev on codinghorror.com



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How the customer explained it



How the Project Leader understood it



How the Analyst designed it

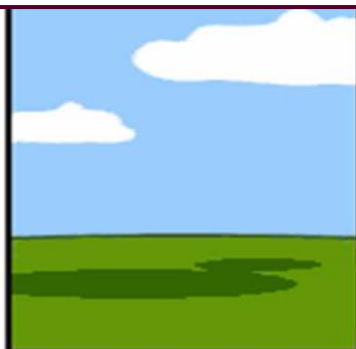


How the Programmer wrote it

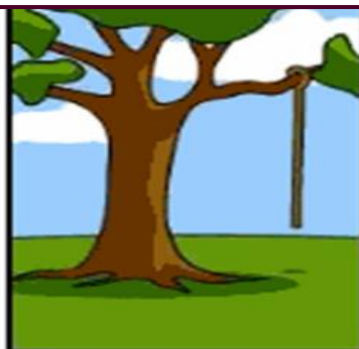


How the Business Consultant described it

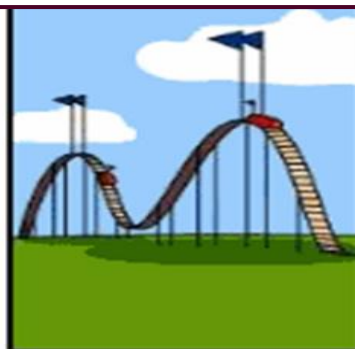
Stakeholder communication during requirements definition



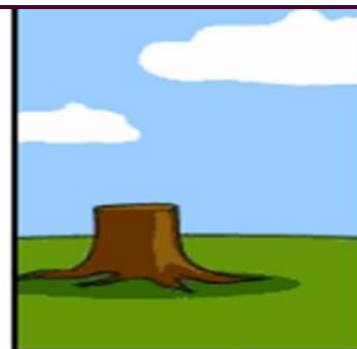
How the project was documented



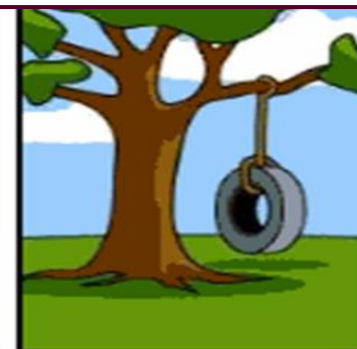
What operations installed



How the customer was billed



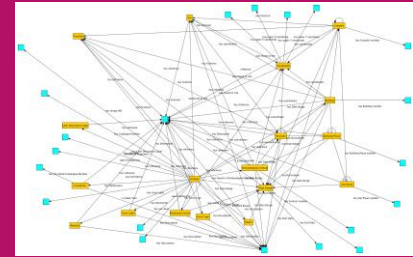
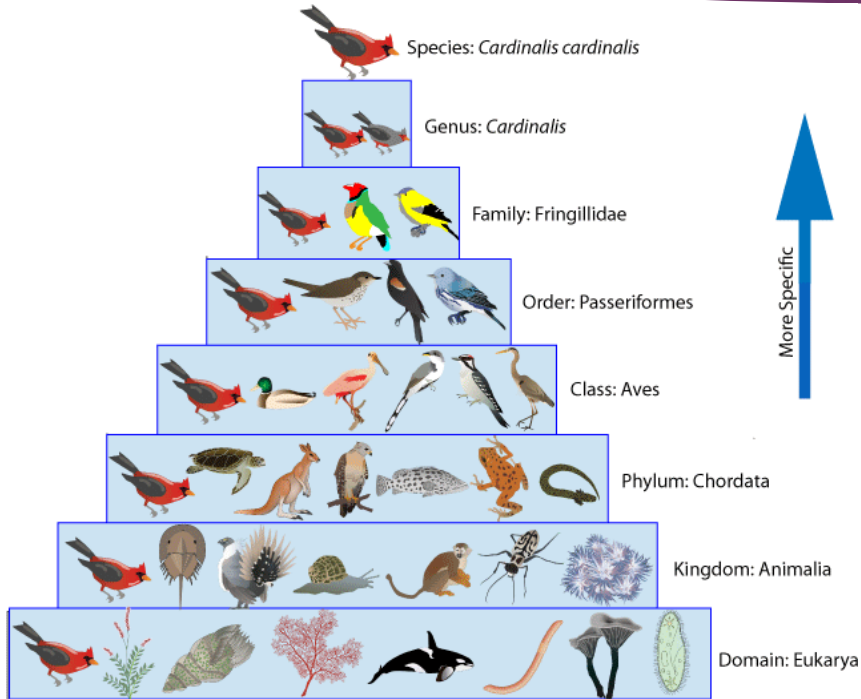
How it was supported



What the customer really needed

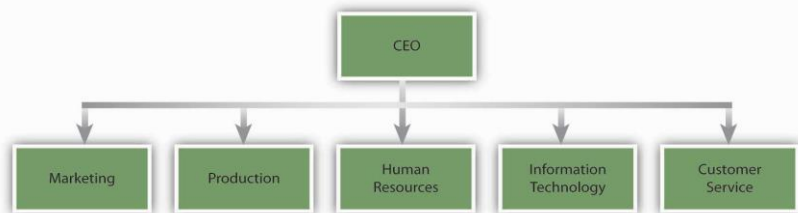
credited to Alex¹² Gorbachev on codinghorror.com

Finding Common Ground by Communicating through Levels of Abstraction

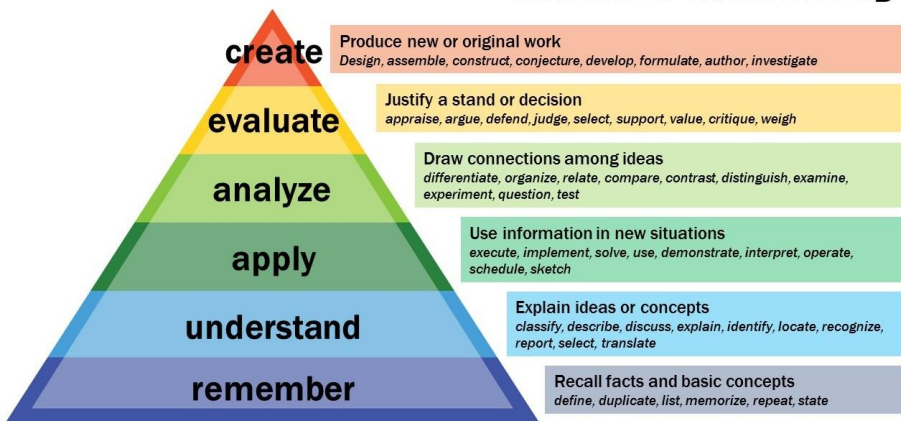


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Levels of Abstraction

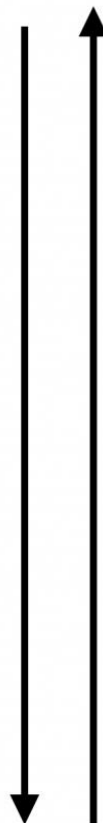


Bloom's Taxonomy



Ladder of Abstraction

More Abstract



More Concrete

Wealth - symbol that refers to prosperity, fortune, and success in relation to material goods or other life conditions

Asset - symbol that recognizes the monetary value of a possession

Livestock - symbol that recognizes animals kept on farms or ranches

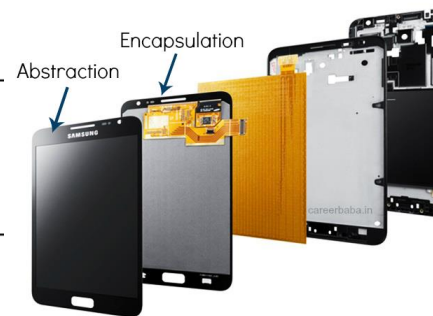
Cow - symbol that recognizes bovine creatures

Bessie - symbol assigned to a "thing" that allows us to communicate about it, even when it is not present

Direct experience with sensory information about a "thing" that we will later call "Bessie"

Abstraction and Encapsulation

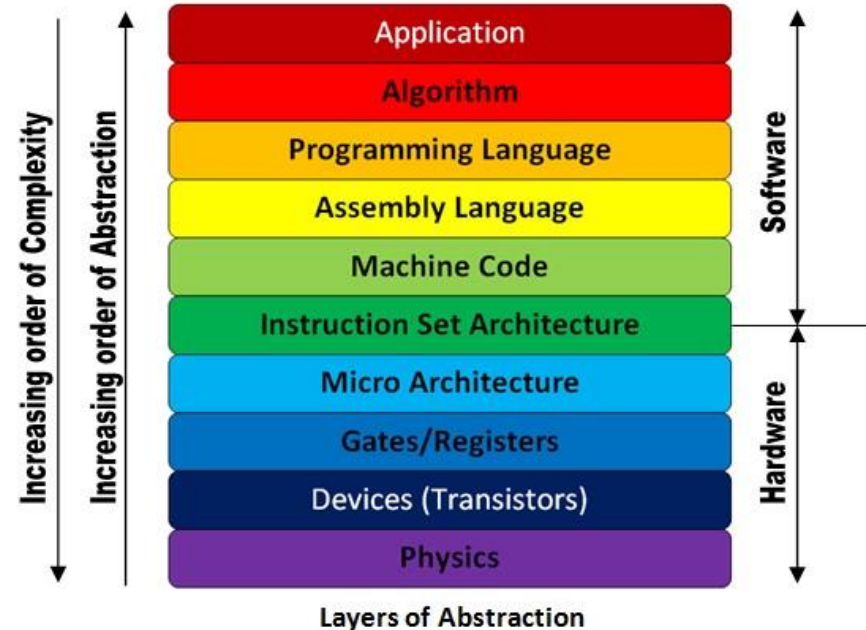
Abstraction	Encapsulation
Abstraction is a general concept formed by extracting common features from specific examples or The act of withdrawing or removing something unnecessary .	Encapsulation is the mechanism that binds together code and the data it manipulates, and keeps both safe from outside interference and misuse .
You can use abstraction using Interface and Abstract Class	You can implement encapsulation using Access Modifiers (Public, Protected & Private)
Abstraction solves the problem in Design Level	Encapsulation solves the problem in Implementation Level
For simplicity, abstraction means hiding implementation using Abstract class and Interface	For simplicity, encapsulation means hiding data using getters and setters



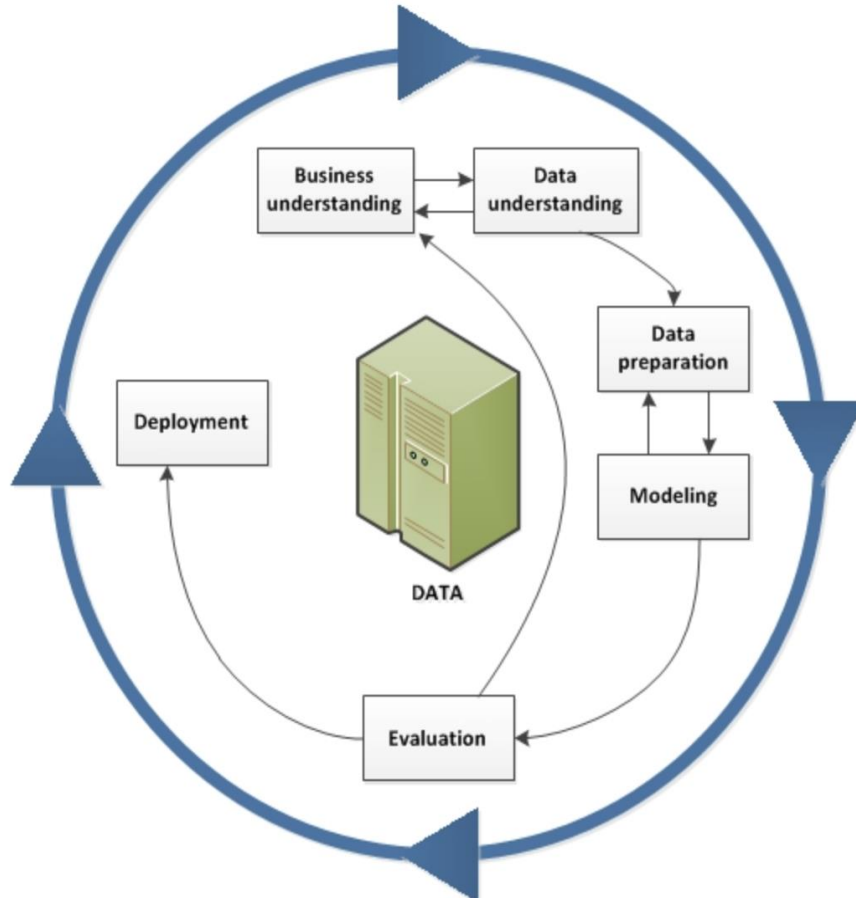
<https://www.facebook.com/zaynali53>

Abstraction and Encapsulation

Abstraction	Encapsulation
1. Abstraction solves the problem in the design level.	1. Encapsulation solves the problem in the implementation level.
2. Abstraction is used for hiding the unwanted data and giving relevant data.	2. Encapsulation means hiding the code and data into a single unit to protect the data from outside world.
3. Abstraction lets you focus on what the object does instead of how it does it	3. Encapsulation means hiding the internal details or mechanics of how an object does something.
4. Abstraction - Outer layout, used in terms of design. For Example:- Outer Look of a Mobile Phone, like it has a display screen and keypad buttons to dial a number.	4. Encapsulation - Inner layout, used in terms of implementation. For Example:- Inner Implementation detail of a Mobile Phone, how keypad button and Display Screen are connect with each other using circuits.



Cross-Industry Standard Process for Data Mining



Levels of Abstraction

- ▶ As a professional (engineer, businessperson, and lawyer), define “abstract”

Video: Computer Scientist Explains Machine Learning in 5 Levels of Difficulty

- ▶ What makes a ____ a ____ and a _____ a _____?

Product Management Responsibilities & Interactions	Role	Responsibility / Interaction
	Executive Sponsors	Define Product Vision & Strategy
	Business & Product Leaders	Define Product Roadmap
	Technology Leaders	Define Product success criteria & KPIs to measure success and ROI
	Legal Stakeholders	Provide legal / compliance requirements; Keep informed, including changes that impact their decisions
	Quality Assurance / Testing Leads	Create and maintain test plan, assist with debugging / product issues
	User Experience Design Teams	Create specifications for product features
	Program Managers	Drive resourcing and release planning Update Business and Stakeholders
	Customer Service / Operations	Voice of customer internally

Roles: Product Manager vs. Product Owner

Product Manager

- ▶ Market/Customer facing. Identifies market needs. Collocated with marketing/business.
- ▶ Owns vision and roadmaps, program backlog, pricing, licensing, ROI.
- ▶ Drives PI objectives and release content via prioritized features and enablers.
- ▶ Establishes feature acceptance criteria.

Product Owner

- ▶ Solution, technology, and team facing. Collocated with team(s).
- ▶ Contributes to vision and program backlog. Owns team backlog and implementation.
- ▶ Defines iterations and stories. Accepts iteration increments.
- ▶ Drives iteration goals and iteration content via prioritized stories.
- ▶ Establishes story acceptance criteria, accepts stories into the baseline.

What role do
Businesspeople play in
an organization?

They own the “What”

- ↓ Drivers of the business
- ↓ Risk owners
- ↓ Revenue Generators
- ↓ Owners of the Vision / Strategy
- ↓ Customer advocates

What role do Engineers play in an organization?

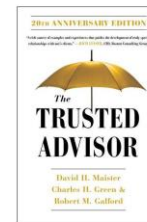
They own the “How”

- ↓ Builders
- ↓ Problem solvers
- ↓ Money makers
- ↓ Customer advocates

What role do Attorneys play in an organization?

They advise if we “should”

- ↓ Advisors to the business*
 - ← Support function / cost center
- ↓ Risk raters / Issue spotters
 - ← Partners in rounding out the strategy
- ↓ Historians
- ↓ Customer advocates
- ↓ Business advocators / negotiators
 - ← Opposing counsel, regulators



*Recommended reading for Law Students:
The Trusted Advisor by David Maister

Roles of lawyers, engineers, and business people

Examples of attorney roles:

- Corporate: filings with the Security and Exchange Commission (SEC)
- Commercial: Negotiate contracts either with customers and/or vendors
- Intellectual Property: Experts in IP law. File for and protect trademarks, copyrights, patents and trade secrets (like drafting cease and desist letters)
- Product Counsel: Working with Product Managers and Engineers, Consumer Protection, Privacy, Marketing
- Privacy: Experts in privacy regulations; draft /apply privacy policy
- Employment
- Litigators
- Antitrust
- Real Estate

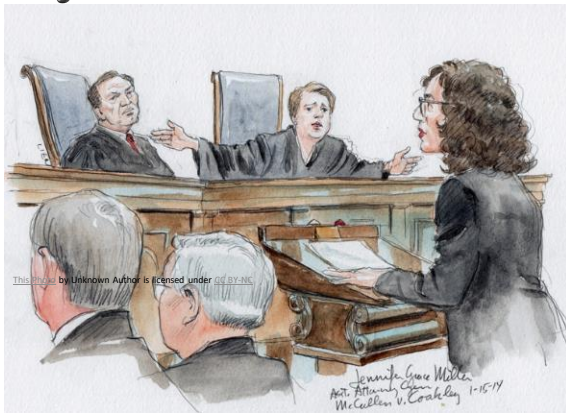
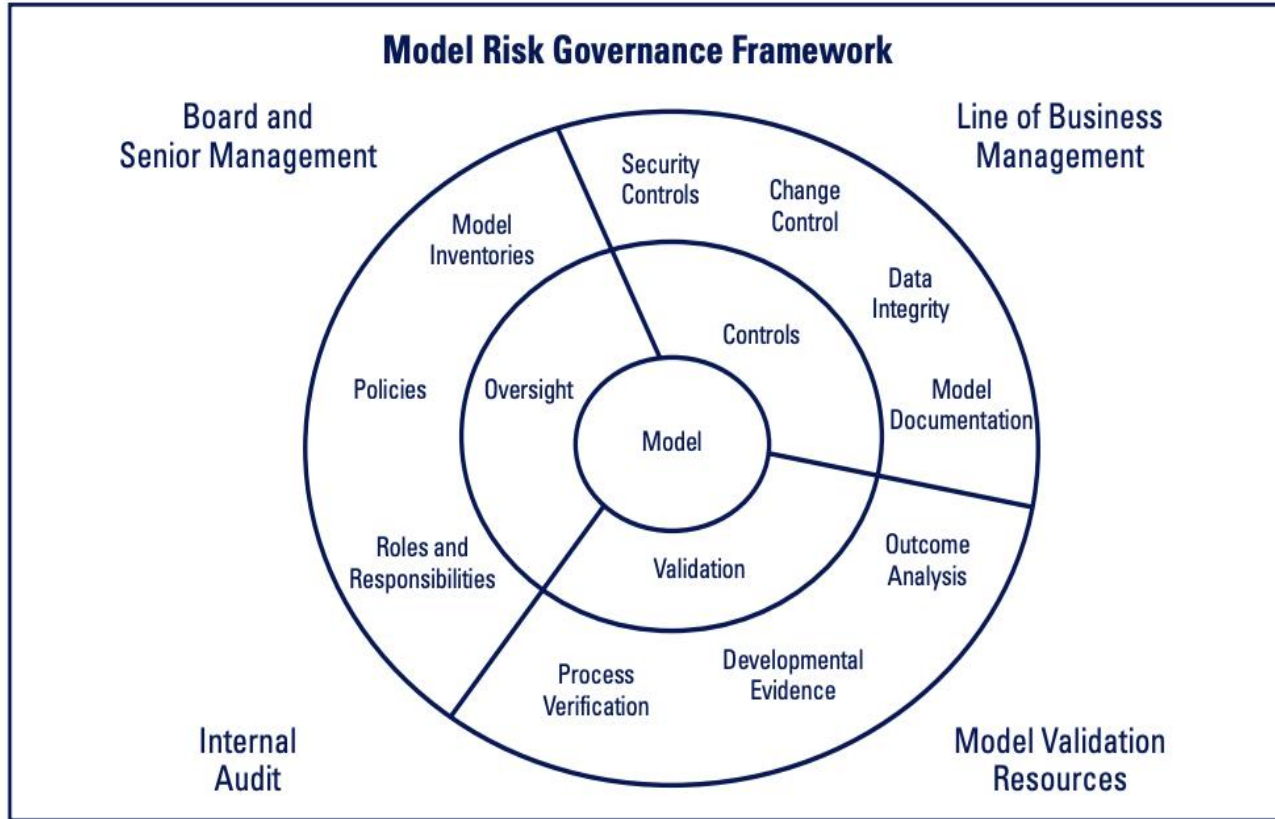



Figure 1





What traits *may* contribute to success -
based on your role within an
organization?

What traits/skills may make an especially effective/useful Businessperson?

See <https://medium.com/pminsider/ten-traits-of-good-product-managers-274937fbba86>; and <https://www.forbes.com/sites/bernardmarr/2019/10/28/the-10-most-important-job-skills-every-company-will-be-looking-for-in-2020/#22f18eb067b6>; and <https://hbr.org/2014/03/the-seven-skills-you-need-to-thrive-in-the-c-suite>

Communication (speaking, writing and listening)	Curiosity	Leadership - team and relationship building
Creativity	Critical / Strategic Thinking & Problem Solving	Growth Mindset
Empathy / Compassion	Prioritization & Execution (decisiveness)	Integrity

What traits/skills may make an especially effective/useful Engineer?

See <https://www.embibe.com/exams/top-10-qualities-of-a-great-engineer/>; <https://newengineer.com/insight/10-characteristics-of-successful-engineers-infographic-1356585>; and <https://www.intercom.com/blog/traits-of-exceptional-engineers/>

Communication (speaking, writing and <i>listening</i>)	Curiosity	Detail-oriented
Math	Critical Thinking & Problem Solving	Negotiation / ability to persuade & analyze tradeoffs
Creativity	Collaboration / team player	Persistence & Patience

What traits/skills may make an especially effective/useful Attorney?

Communication (speaking, writing and <i>listening</i>)	<i>Empathy/ Compassion</i>	<i>Knowledge of the law</i>
Assertiveness	Analytical skills	Negotiation / ability to persuade & analyze tradeoffs
Creativity	Research / Reading skills	Persistence & Patience

See <https://www.attorneyatwork.com/five-traits-great-lawyers/>;
<https://www.allaboutlaw.co.uk/stage/becoming-a-lawyer/7-qualities-every-good-lawyer-should-have>; and
<https://www.alu.edu/what-makes-a-good-lawyer/>

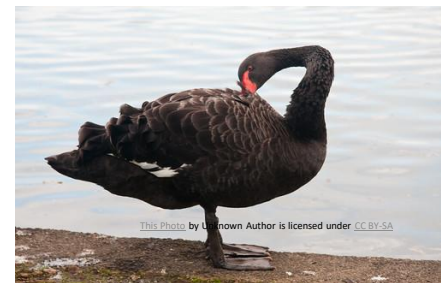
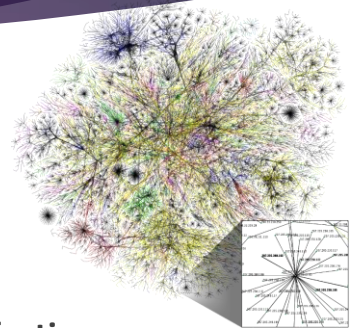


How do these traits to compare with
your StrengthsFinder Results?

Exercise: Designing your organization(s)

Include:

- Your current (and/or intended) role
 - Opportunities to design a more rewarding/satisfying/fulfilling/edifying role
 - The key stakeholders with whom you (will) interact (how might AI be a factor?)
 - A simple description of how you expect to interact
- What are the typical interaction patterns and most compelling opportunities to establish effective communication between the roles represented?
- Describe some examples of significant interactions (when/how) between stakeholders. When are the stakes highest?
- How might roles/communications change during nonroutine events?
 - Crisis / board meeting / merger / existential threatening event...
- What do your stakeholder understand your role / intended role?
- <https://lucid.app/?referringApp=canvas2024>



Example: Self/co-designed role on an innovation/value-focused CISO

- ▶ Developing working models for trusted collaborative partnerships
- ▶ Developing "trustworthy by design"/"ethical AI" system development and validation programs
- ▶ Product security ideation workshops and marketing content creation
- ▶ Strategic business development and outbound industry evangelism
- ▶ Cybersecurity program operational and compliance maturity assessment
- ▶ Cloud, application, systems security, IAM, and enterprise architecture capability strategy
- ▶ Integrated planning for programs, projects, products, and change management
- ▶ Enabling innovation through pragmatic, security policy and corresponding performance measurement
- ▶ Threat modelling, business impact assessment, supply chain risk management, and DRP
- ▶ Advising, coaching, and competency development for teams (i.e. interactive training)

Action: read the job descriptions of your stakeholders and ask clarifying questions

Create Teams Using Organizing Principles

Task:

Form 3 balanced teams that let everyone play role(s) they prefer, favoring team diversity and new relationships

Organizing Principles:

Each team must have:

1. A team anchor – (e.g. spokesperson from survival exercise)
2. 4-6 students
3. at least one member that:
 - is currently an engineering student or has worked as an engineer
 - is currently a law student or has worked as an attorney
 - is currently a business student or has worked as a business person /product manager




BRONCO VENTURES

ACCELERATOR
PREP SCHOOL
IDEA LAB
PITCH COMPETITION



CIOCCA CENTER
AT SANTA CLARA UNIVERSITY



The background of the entire image is a night-time photograph of a snowy mountain town. In the foreground, a large screen with red curtains is positioned as if in a theater. The screen displays the text "What will you pack for your ad-venture?". To the left of the screen, a portion of a tan suitcase with brown leather straps is visible. To the right, a blue rolling suitcase stands upright. The town in the background has snow-covered roofs and some lit-up buildings, with dark, snow-covered mountains rising behind it.

What will you
pack for your
ad-venture?



How does your
ad-venture start?

Fact
Pattern
1

Data Clouds

You and your companions are invited to an entrepreneurship retreat.
The daily temperature is -20°C outdoors and 20°C indoors.
The nearest luxury spa and pub are less than 2 miles away.
You are all dressed in business attire appropriate for a business meeting.
Your group managed to bring fifteen business assets.



Revenue streams

As a group, rank the **15** assets in order of importance for your ad-venture.

List and prepare to discuss the uses for each.

Group agreement is optional.



Data Lakes

Use
external data
sources

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Spellbook

Cash

Patents

Facilities

Copyrights

Trademarks

Trade Secrets

Business processes

Market intelligence

R&D project portfolio

Product management expertise

Organization mission and/or vision

Legal, compliance, & ethics expertise

Management and operations expertise

System engineering/technical expertise

Information systems and data gathering methods



READ OUT





Why rank
hypothetical
business assets?





Who is
picking/packing
your suitcase?





How can you ask
hard questions?





What questions can be anticipated/asked now?

Agenda

- ▶ Recap and Discuss Module 1 Reflections and your insights about StrengthsFinder
- ▶ Discuss self-directed research project topic ideas and generative AI countermeasures
- ▶ Communicating with Levels of Abstraction
- ▶ Product management responsibilities & interactions
- ▶ Roles of lawyers, businesspeople, and engineers
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Assignment and Reading

- ▶ Explore StrengthsFinder
- ▶ Watch Videos on 5 Levels and Agile/Scrum
- ▶ Reflection #2

Next time:

You have a vision from your CEO -- now **what** are you going to build, for **who**, and **how** are you going to build it? “**Should**” we build it?

- Product Management
- Agile Software Development
- Writing Product Requirements
 - User Stories
- Resourcing
- Legal Considerations

Think about the Fact Pattern 1 questions and what information, expertise, resources, and skills may need based on your CEO's instructions.