

TIM I75: Business Strategy and Information Systems

David Lee, Spring 2025

Today

- Overview of course focus and structure
- Overview of business strategy
- Overview of thematic analysis
- Upcoming deliverables
 - Intro survey due TODAY (*most of you have done this already*),
 - Homework I (individual) due SATURDAY at 11:59pm,

What is this
course about?

This course many years ago

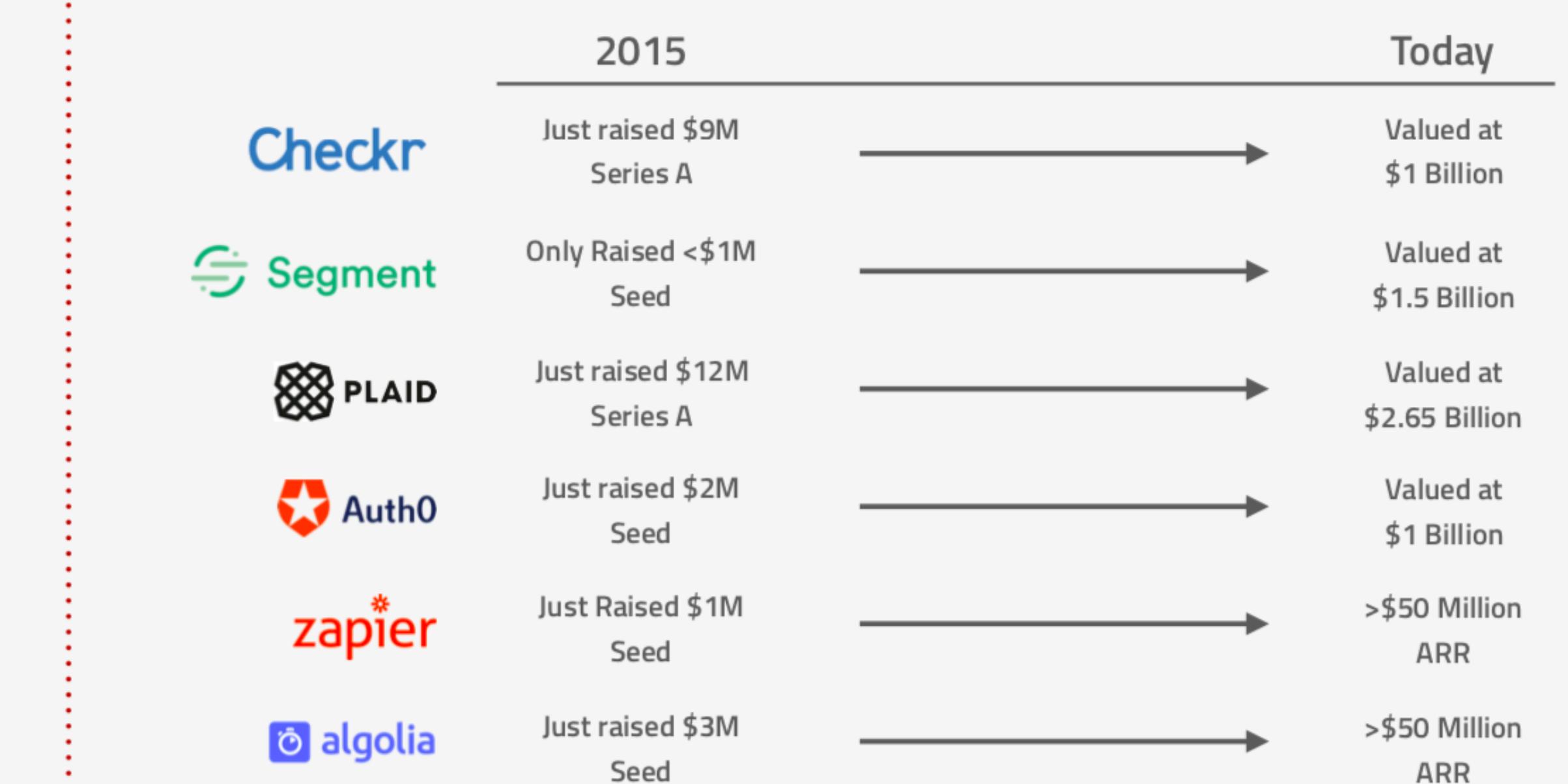
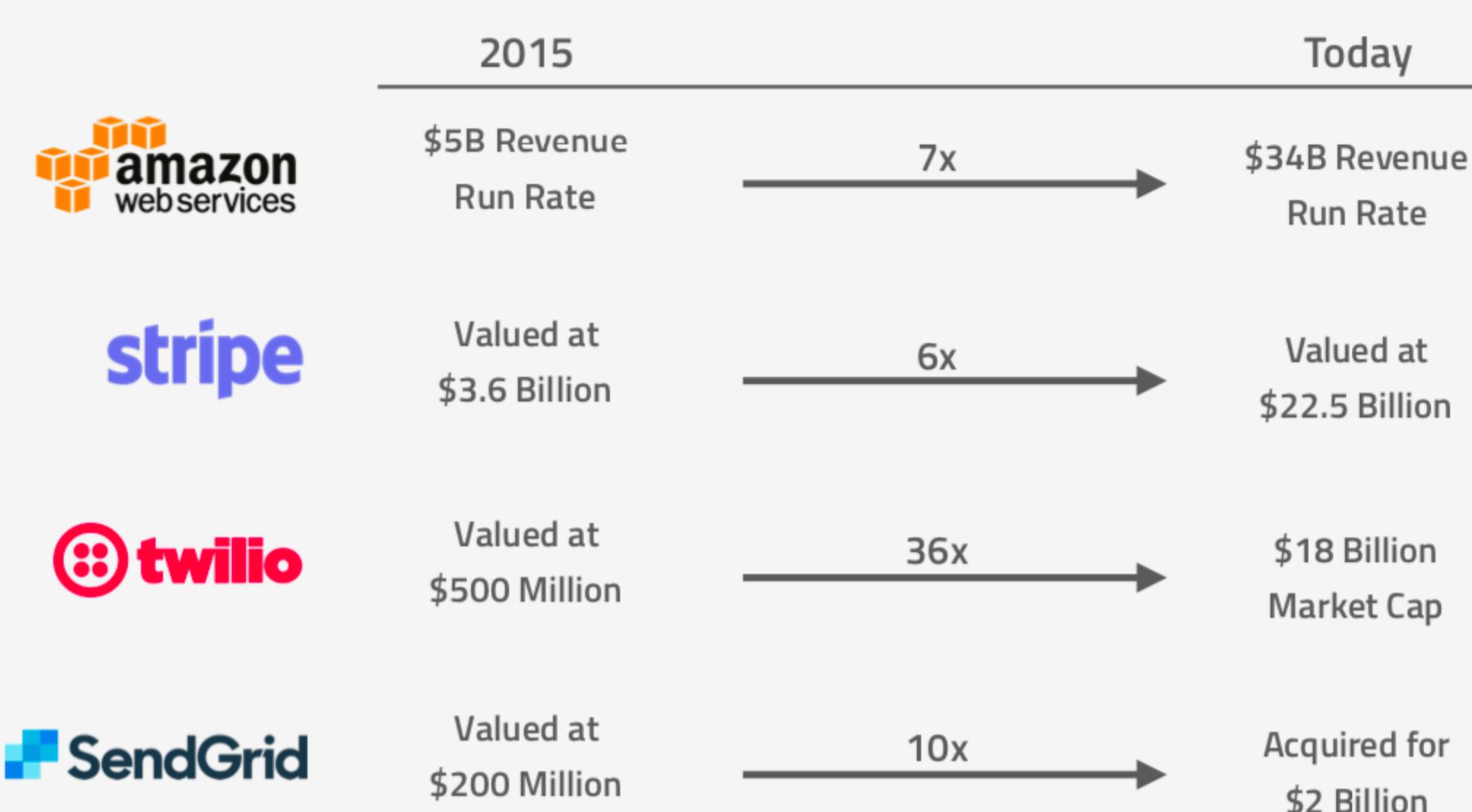
- Governing and maintaining existing IT investments,
- Determine whether to build or buy new IT to support,
- How strategic concerns inform the above

“Software is eating the world.”



Marc Andreessen (2011)
Founder, a16z

APX Economy



Big Milestones Over Last 3 Years


Company IPO's, reaching \$20B
Market Cap, processing \$200
billion annually


Expanding across EMEA and
nearing 500 employees after
raising \$175 million


Founded in 2016 at age 19, Alex
Wang has built a \$1 billion
company in 3 years


Recently filed S-1 with >\$250
million in ARR and over 80,000
paying customers


Raised \$60 million Series A in
2018 and has >10,000 paying
customers

Rising Stars



Next-generation spreadsheet



Authentication-as-a-service



Global payments



Contextual data



Image and video management



Collaborative docs



Mexican payments



Spreadsheet for data and APIs



Shipping management



Identity and access management



Image processing



Microservice API gateway



Direct mail and address verification



Mapping and location services



Background checks on businesses



Video hosting and streaming



Post-purchase management



Static website hosting



Location context



Interactive developer docs



Multi-carrier shipping



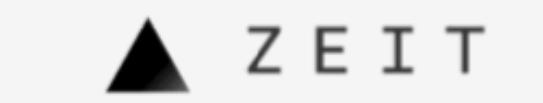
Workflow automation



Background checks for LATAM



Indonesian payments



Website deployment



A portrait of Satya Nadella, CEO of Microsoft. He is a middle-aged man with a shaved head, wearing dark-rimmed glasses and a dark t-shirt. He is looking slightly to his left with a faint smile.

*“Every company is now a
software company.”*

Satya Nadella (2019)
CEO, Microsoft

Walmart Doubles Down On Its Transformation Into A Technology Company

Forbes



Pamela N. Danziger Senior Contributor

Retail

I study the world's most powerful consumers -

‘At this past June’s Walmart Associate and Shareholders Meeting, CEO Doug McMillon continually referred to Walmart as a “technology company.”’

[MIT Technology Review](#) asked, “Walmart wants us to believe it’s turning into a tech company?”

In today's world,

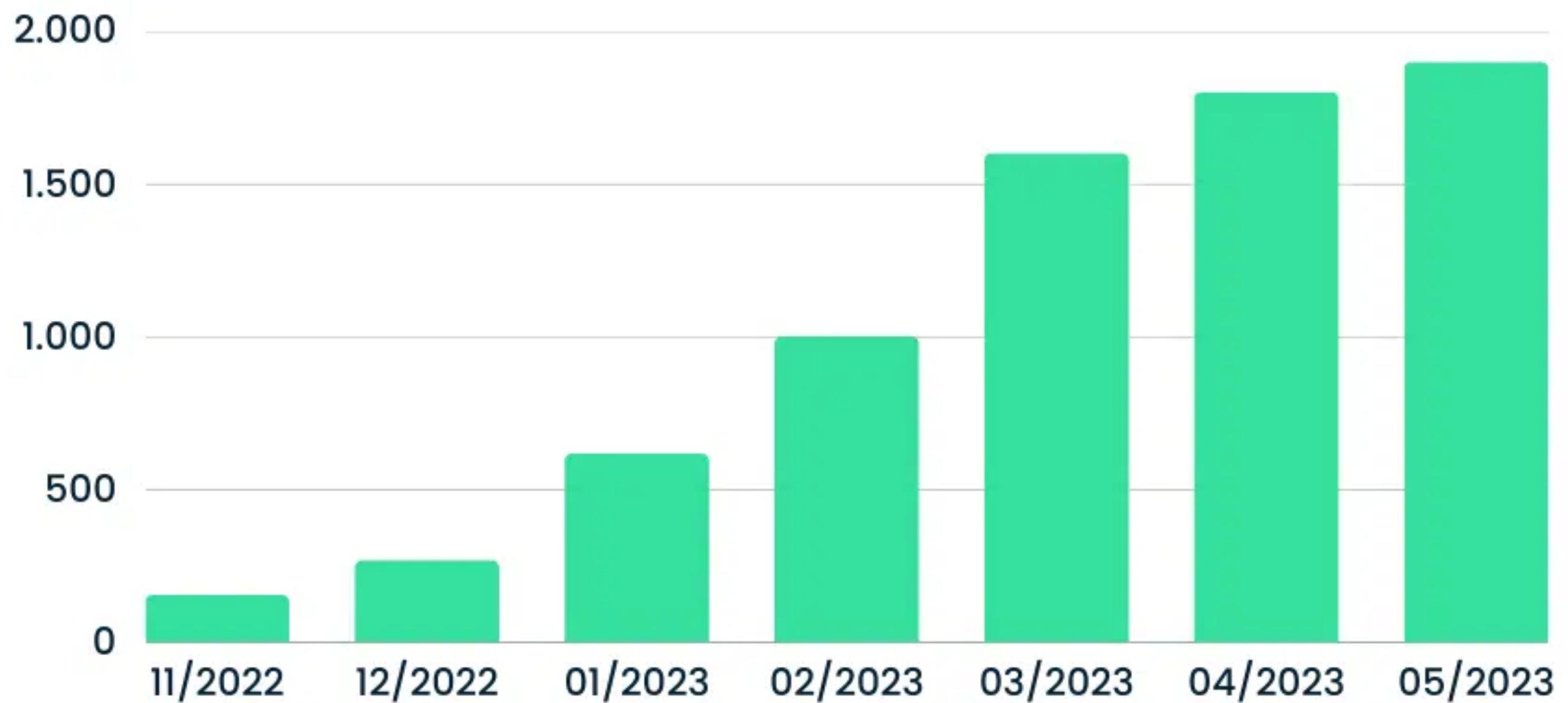
Business strategy and information systems
should be about nurturing design thinking & digital
innovation within your company

And being able to blend an understanding of
business needs and strategy with use of digital tools

*This is even more
the case now with
generative AI*

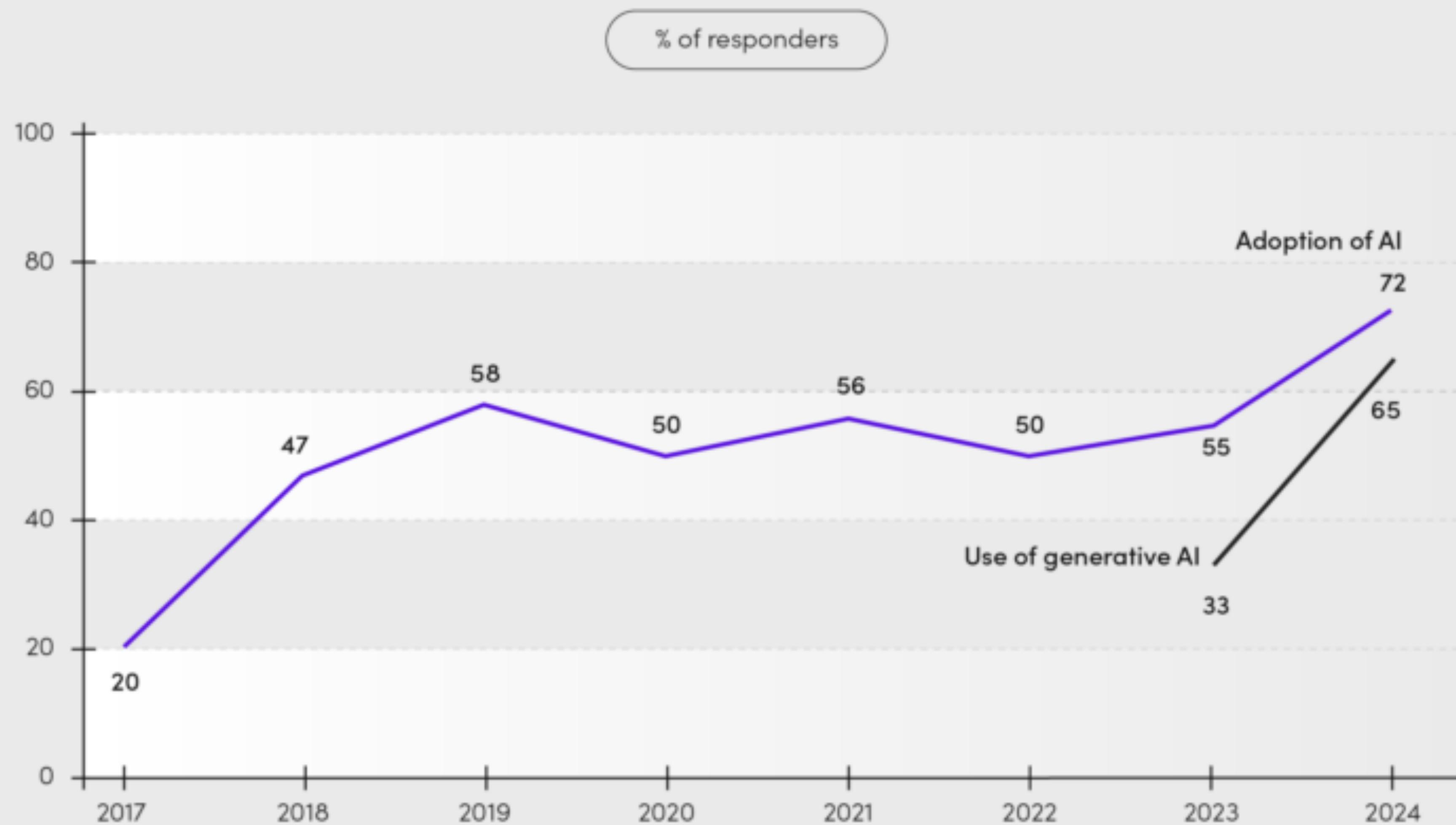
Monthly visits to **openai.com**

Millions of users



Source: SimilarWeb

Organizations that have adopted AI in at least 1 business function



Source: McKinsey Global Survey on AI, 1,363 participants at all levels of the organization, Feb 22-Mar 5, 2024



This year, our focus in the class is on

**Learning to use generative
AI within organizations**



Most of your work will center on delivering a ‘real-world’ project so you can develop an understanding of practice.

This takes immense amounts of time to set up - take advantage of it!

Linking Students To Careers

BUSINESS LEADERS. EDUCATORS. BRIDGE BUILDERS. YFIOB IS DEDICATED TO PROVIDING EVERY SANTA CRUZ COUNTY STUDENT WITH OPPORTUNITIES TO FORGE A PATH TO A FULFILLING AND SUCCESSFUL CAREER.

JOIN US

Full Podcasts:



▶ Angie Wootton | Assistant Professor School of Social Welfare, University at Albany SUNY



Share



29:15

▶ 23

 Angie Wootton | Assistant Professor School of Social Welfare, University at Albany SUNY ▶ 23

 Gordon Campbell | Science Writer & Biologist ▶ 6

 Jenny Kurzweil | ▶ 2

 Martha Mendoza | AP Investigative Reporter

 Martha Ceja | United Way Senior Program Manager at Cradle to Career ▶ 4

 Rocky Snyder | Rocky's Fitness & Conditioning ▶ 1

 Holly Hughes | Clinician & CEO of Holly Hughes & Co ▶ 1

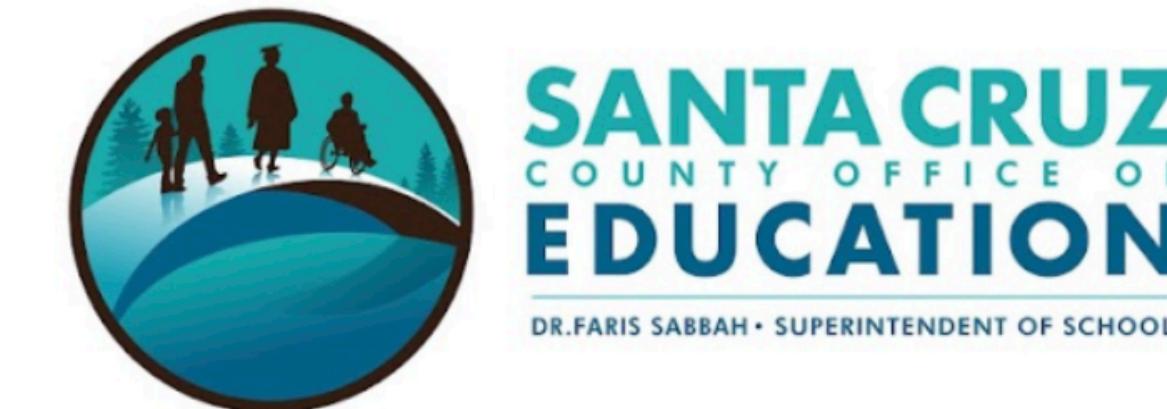
 Latest tracks by [What To Be](#)

[Privacy policy](#)

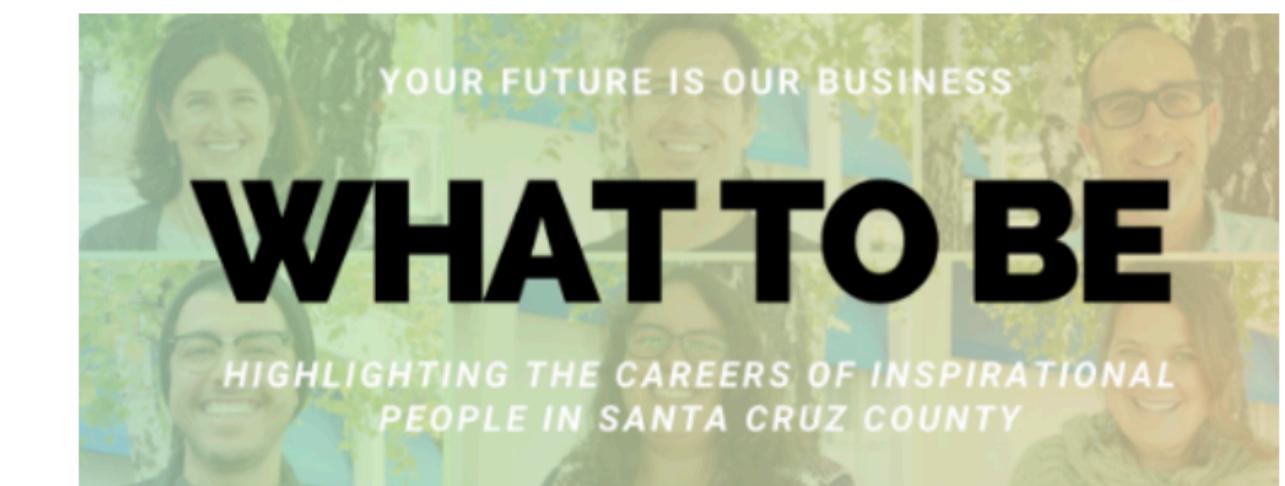
Useful Links:



[What To Be Podcast on Audible](#)



[K-12 Computer Science Initiative Guest Speaker Videos](#)



[Subscribe To Or Download The What To Be Podcast Here](#)

Two mini-projects

- **Weeks 2-5:** extract and synthesize podcast themes to share career insights and support exploration
- **Weeks 7-9:** develop a career Q&A experience with responses grounded in podcast insights and stories

How is the course
structured?

Semi-studio based class

- Some traditional lectures; provided readings / videos (added weekly)
- Plus some interactive time in lectures for working on and discussing the project deliverables
- In-person section attendance is mandatory for staff critique, peer review, and working with your team
- Lecture attendance is also mandatory (Zoom attendance allowed if you are engaged in your team, but ***will likely not be supported - in-person support will take priority***)

Sections are mandatory!

- This is a guaranteed time for staff critique, and to coordinate, discuss and peer review / work with your team
- Your assigned team and section will be on the spreadsheet by Thursday lecture
 - Some people's section times may change based on the survey
 - In-person attendance is mandatory and graded
 - We tried remote attendance in past years, and it just doesn't work

Weekly deliverables

- 3 weekly deliverables in weeks 2-5, 7-9 — this is a project course so be prepared to put in time
 - Prelab (individual, due Tuesday 11:59pm): for developing conceptual understanding and practicing skills
 - Lab (individual, due Saturday 11:59pm): for applying what you learned to the project
 - Lab (team, due Monday 11:59pm): summarize peer review and iterate on / synthesize individual work
- There will be time in lecture to get started on individual deliverables, almost all of section time centers on working on the team deliverable
- Weeks 1, 6, and 10 only have individual deliverables

Team work

- Teams of 4-6
 - We will assign teams of 5-6, but there may be some drops
- We have tried to prevent freeloading (it will be difficult to pass as a freeloader)
 - Section attendance and engagement
 - Individual deliverables
 - Peer evaluation
- Most of the work will be done through the individual deliverable, the team deliverable mostly centers on critiquing, synthesizing, and improving the quality

Individual vs. team feedback

- Prelab is just graded on whether you've put in effort, we will discuss it in class
- Individual lab will get 1-2 sentences of feedback, discussion in section, and a Check+, Check, Check-, Minus+, Minus grade
 - Check+ (102): outstanding, one of the best in the class
 - Check (95): solid, though not one of the best in the class
 - Check- (80): did the work but needs improvement
 - Minus+ (40): low quality or missing significant portions
 - Minus (0): did not do the work or barely did any work
- Team lab will be given detailed feedback and graded on a detailed assignment-specific rubric. We will look to see that the critique is addressed in the following submissions

Wk	Lectures and Sections (canvas, recordings, slides)			Assignments (due 11:59pm)	Readings or Videos
	BACKGROUND CONTEXT				
1	4/1	T	Lecture. Course intro, business strategy, gen ai, thematic analysis	Intro survey	Strategic implications of generative AI, KPMG
		Th	Lecture/Studio. More on the course structure, homework walkthrough		theresanaiforthat.com
		Sa		Lab 1 indiv	How to Do a Thematic Analysis of User Interviews, Ditte Hvas Mortensen, Interaction Design Foundation
2		M	Section. Preliminaries and connections - (30 mins) Section-wide community-building - (15 mins) Connect with teams - (20 mins) Get setup / technical issues ironed out		Michael Porter's Three Great Strategy Contributions, Roger Martin
	PROJECT 1: DESIGNING PROMPTS FOR THEMATIC ANALYSIS				
	4/8	T	Lecture. Prompt engineering : zero shot, few shot, chain of thought	Prelab 2	Prompt design strategies, Google Prompt engineering, OpenAI Prompting techniques
3		Th	Studio. Task overview and prompt engineering lab walkthrough		Introduction to Vertex AI Studio, Google Cloud (can skip multi-modal portion from 5:18 to 13:00)
		Sa		Lab 2 indiv	Prompt engineering for small businesses, Adobe
		M	Section. Feedback and team submission - (15 mins) Staff raise major issues observed - (15 mins) Detailed peer review (A -> B -> C -> D -> A) - (35 mins) Work on team submission: turn in a single final version plus a synthesis of the detailed peer review and improvements	Lab 2 team	
4	4/15	T	Lecture. Prompt evaluation : defining metrics, LLM-as-a-judge	Prelab 3	Deploying an application with Generative AI best practices
		Th	Studio. Task overview and prompt evaluation lab walkthrough		LastMile AutoEval
		Sa		Lab 3 indiv	
5		M	Section. Feedback and team submission [same rhythm as week 2]	Lab 3 team	
	4/22	T	Lecture. Prompt workflows : micro-tasks, APIs	Prelab 4	Concept Induction: Analyzing Unstructured Text with High-Level Concepts Using LLoM
		Th	Studio. Task overview and prompt workflow lab walkthrough		
6		Sa		Lab 4 indiv	
		M	Section. Feedback and team submission [same rhythm as week 2]	Lab 4 team	
	4/29	T	Lecture. LLM website generation : visualize data/concepts	Prelab 5	TBD
		Th	Studio. Task overview and generate demos lab walkthrough	Lab 5 indiv	
		Sa			
		M	Section. Work on team submission for final demo (two demos ok too)	Lab 5 team	
	ASSESSMENT WEEK				
6	5/6	T	Lecture. Describe assessment task, begin task, submit initial thoughts and partial progress at the end of the class, continue at home		
		Th	Presentations: Watch Week 5 demos and vote on top ideas [David at Consortium]	Assessment	
		Sa			

Any questions?

Intro / refresher on Business Strategy

(think about where the use of GenAI might play into different aspects of strategy)

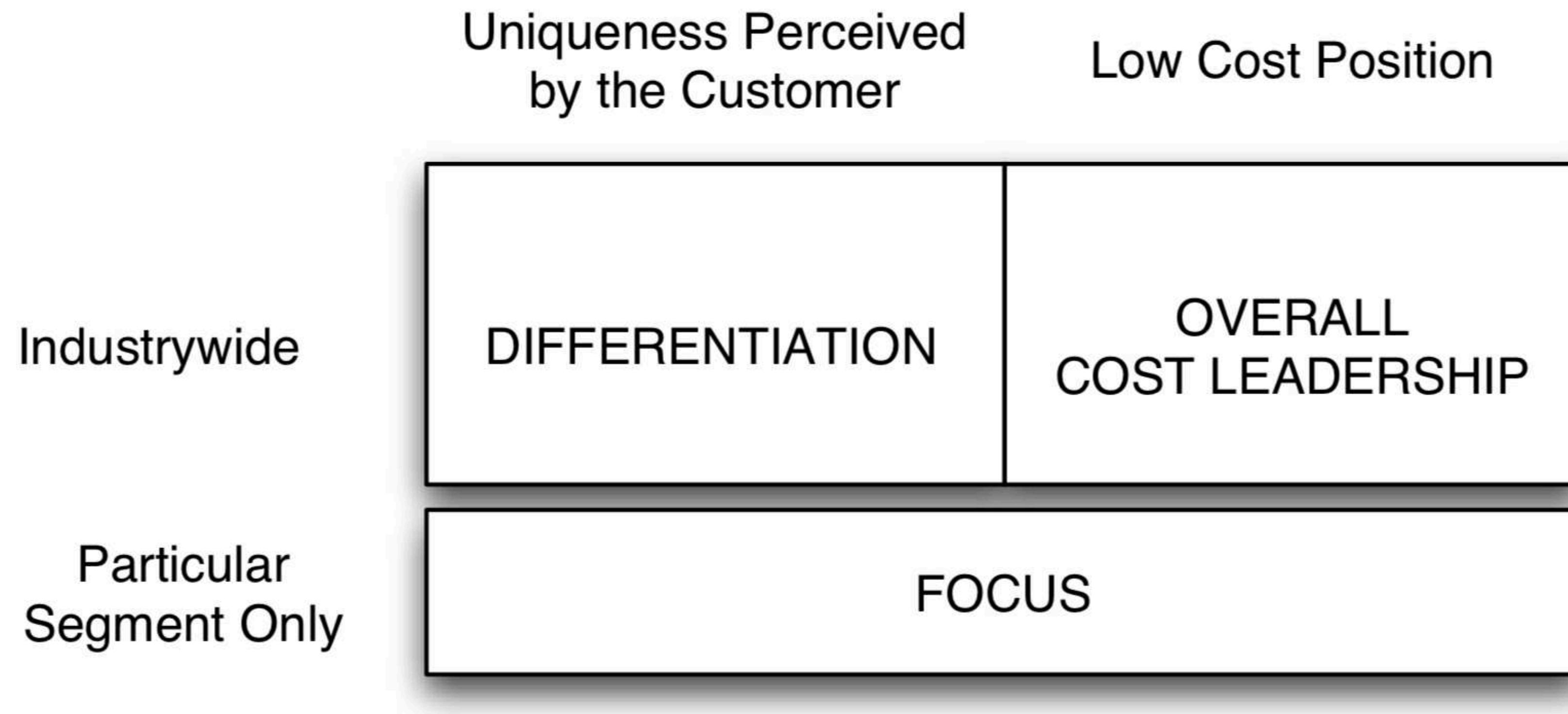
Strategy is creating something
unique and different

That gives you a sustainable
advantage over competitors

Michael Porter
Professor, Harvard Business School



The essence of strategy is activities



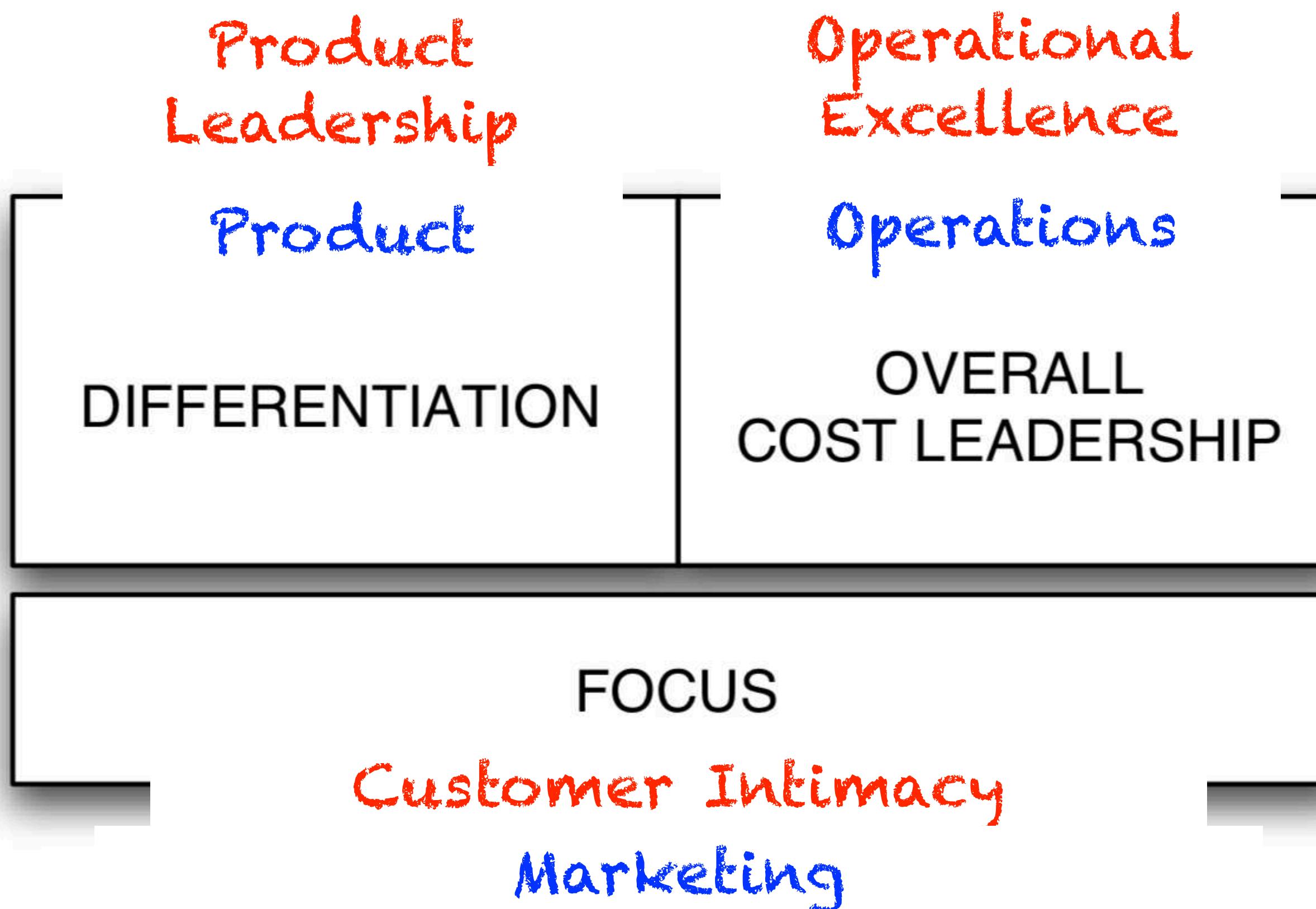
Porter's three generic strategies (1980)

Strategy comes from unique activities or unique ways of performing them.

Positions require tradeoffs.

Correspondence to Values and Functions

Michael Treacy, Fred Wiersema (1993)

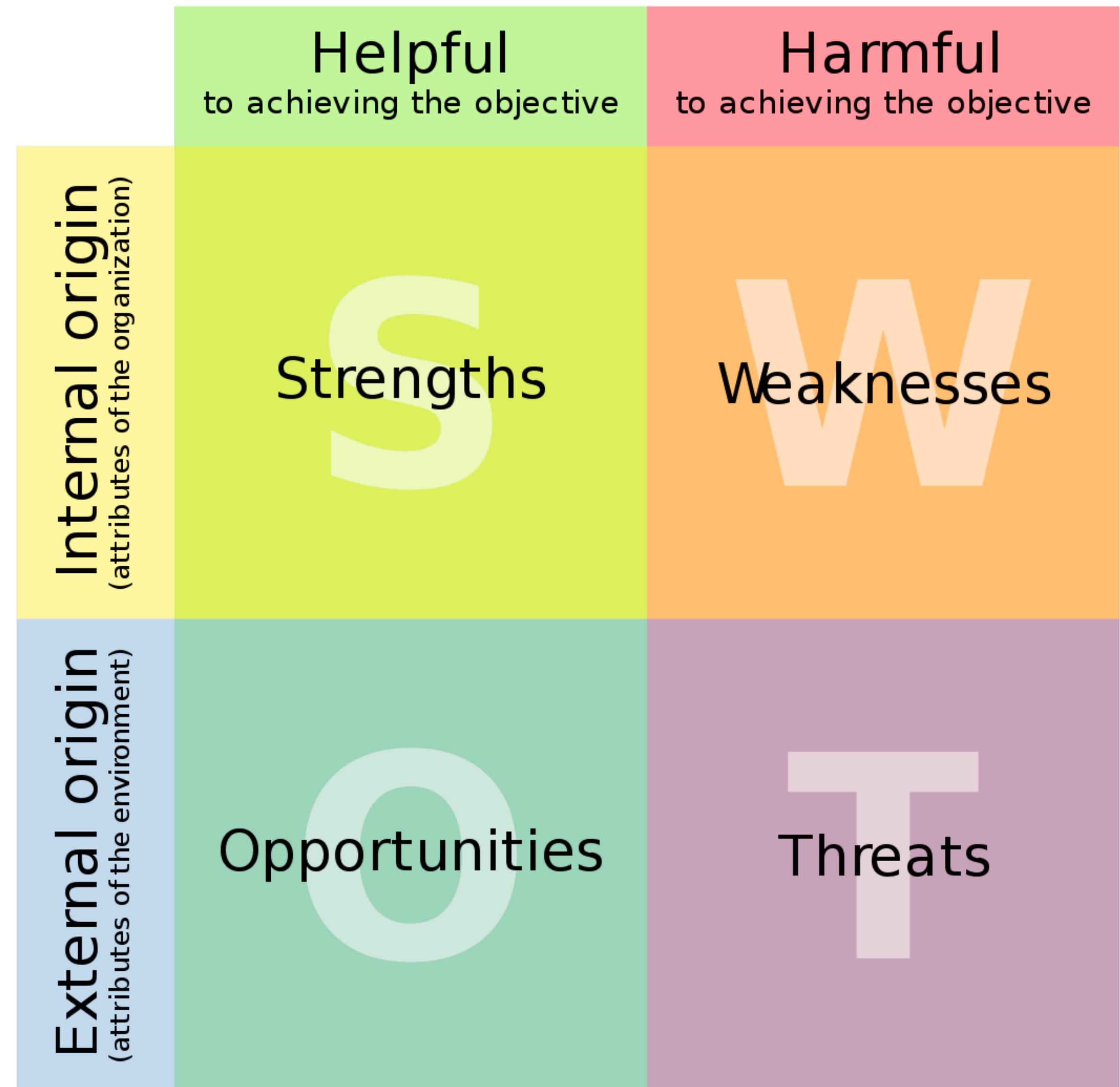


Three value disciplines
that provide
competitive advantage

Assessment tools: SWOT Analysis

Understand your core competencies.

Identify relationships between internal and external factors



Assessment tools: PEST Analysis

Dive deeper into external factors that may inform opportunities and threats.

What political, economic, social, and technological factors may be relevant?



Assessment tools: Porter's 5 Forces

Understand the basic competitive forces in your industry.

It's not just your direct competitors.



DEFINITION OF

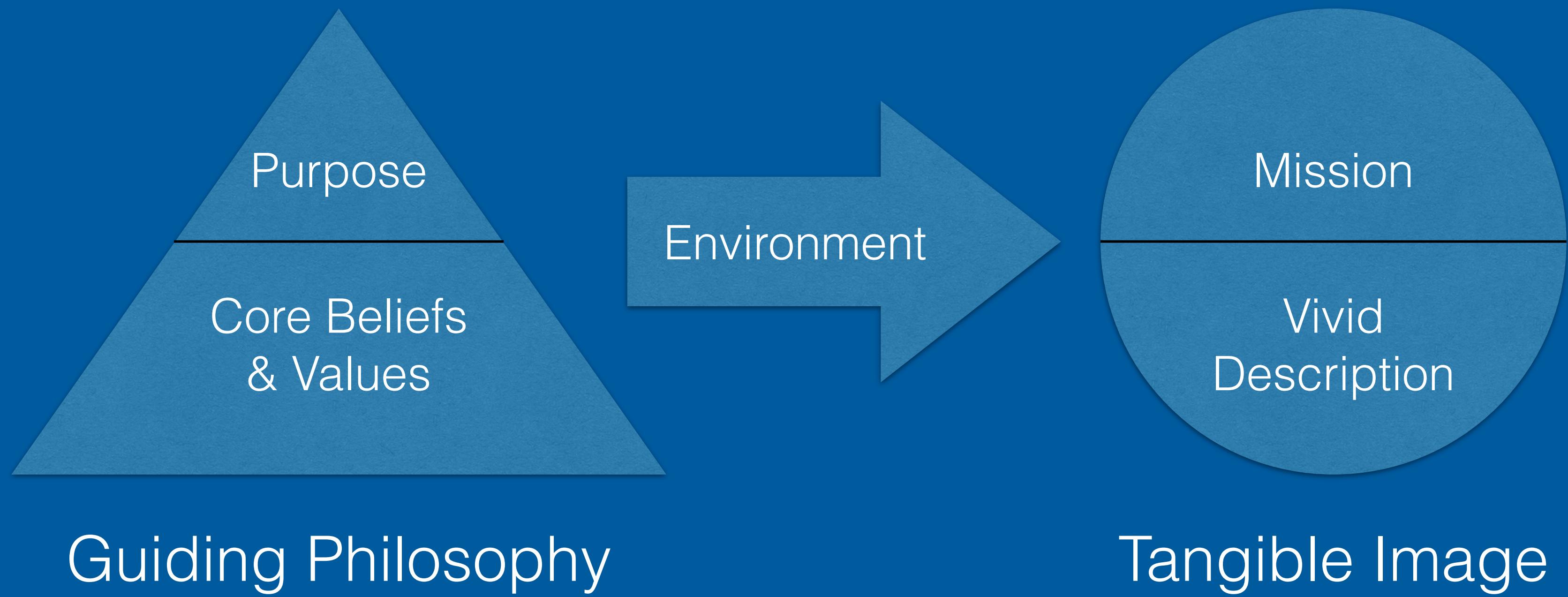
strategy

a plan of action or policy designed
to achieve a major or overall aim

You'll often hear
strategy used in this
broader sense

Company mission and vision

A guiding philosophy that in the context of expected future environments, leads to a tangible image.



Organizational Vision & Visionary Organizations, James Collins & Jerry Porras, 1991

Mission-driven business





Strategy is how you will achieve your mission.

How your mission will translate into activities.



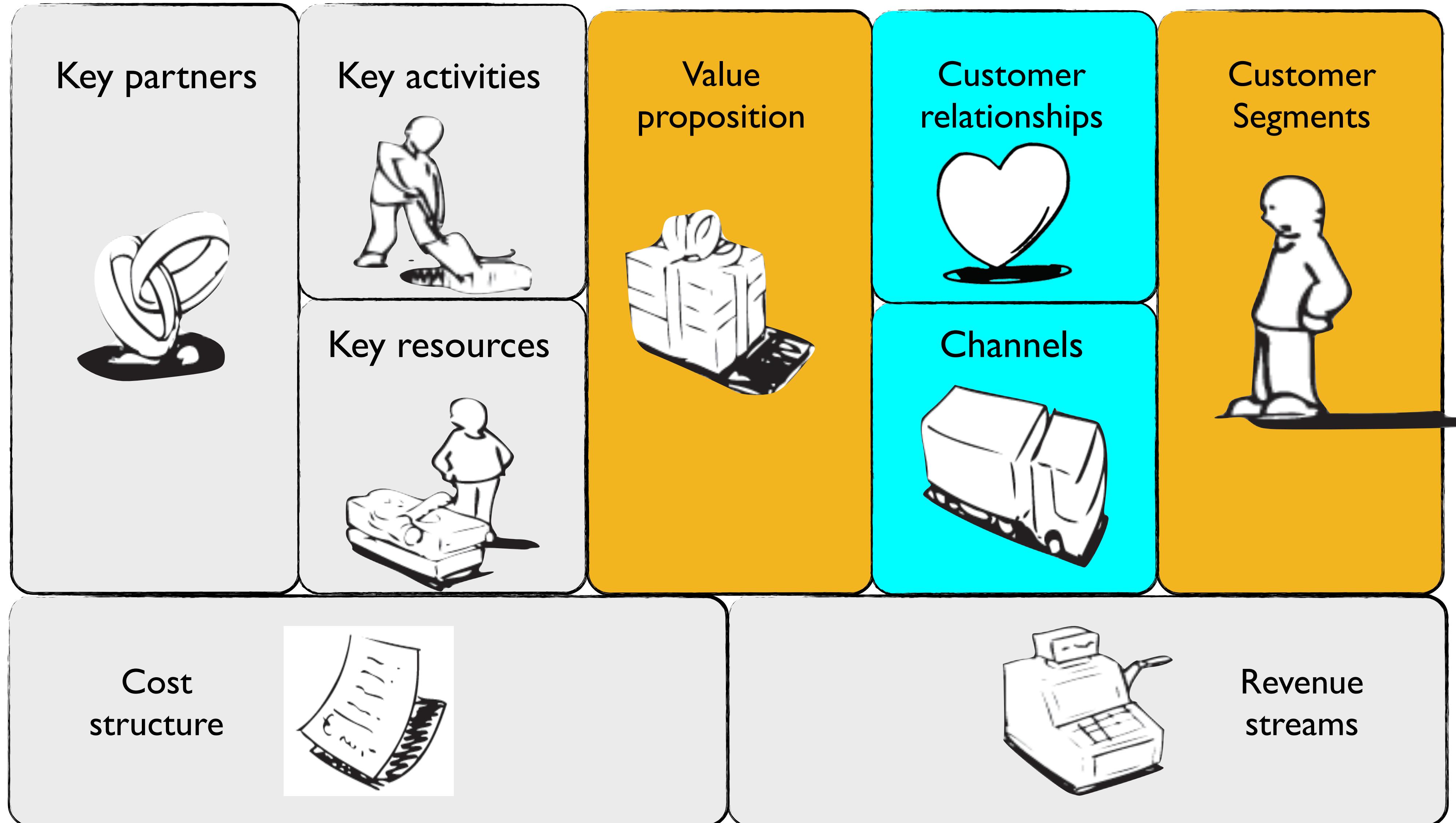
*Anything that helps you get
from mission to activities*

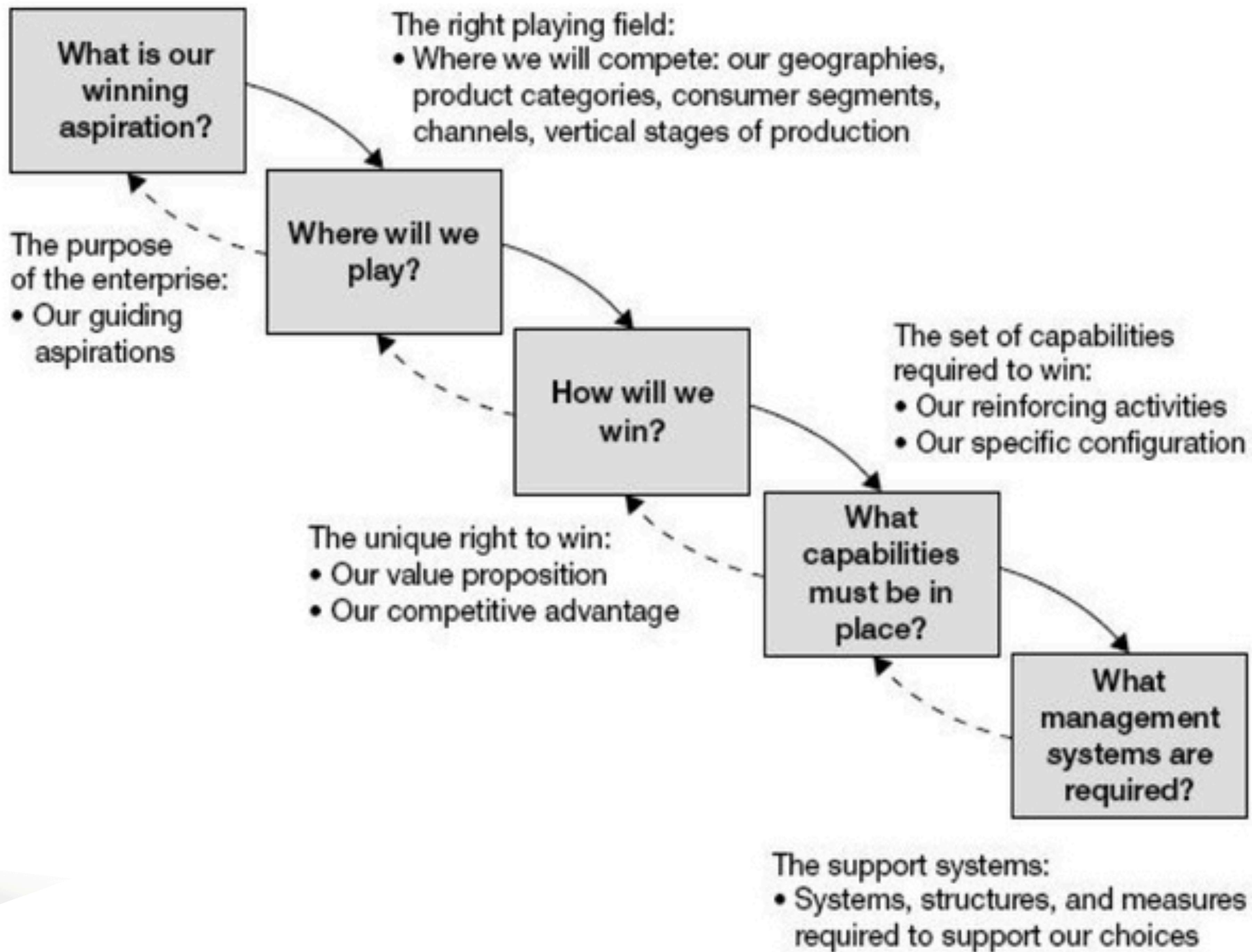
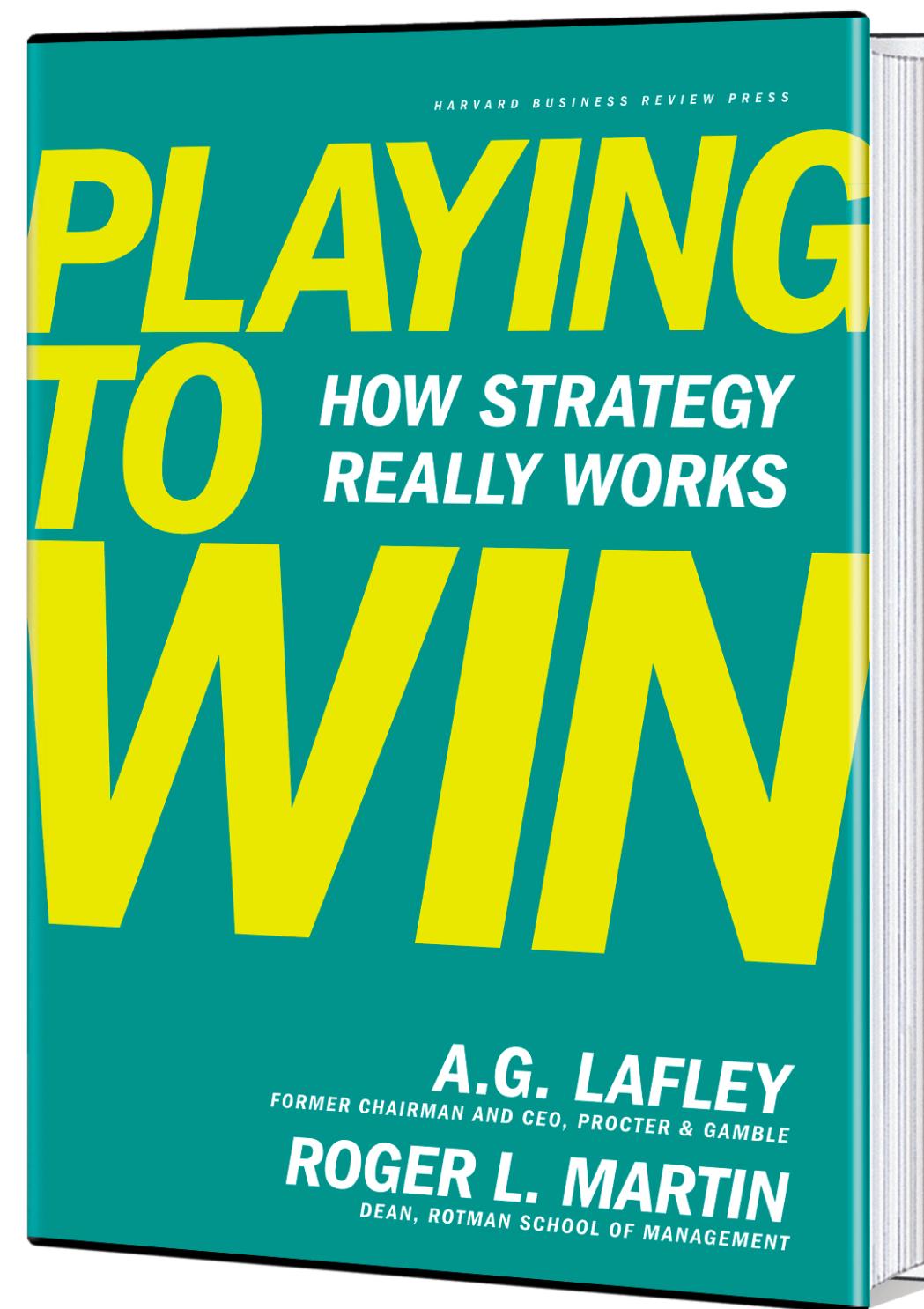
strategic roadmap

strategic positioning

guiding principles

Business Model Canvas





First part of homework I:

Share a reflection of how organizations should be thinking about Generative AI when considering their business strategy.

Use a business framework in your discussion in a substantive way and use concrete examples of real organizations to illustrate your thoughts.

Thematic Analysis

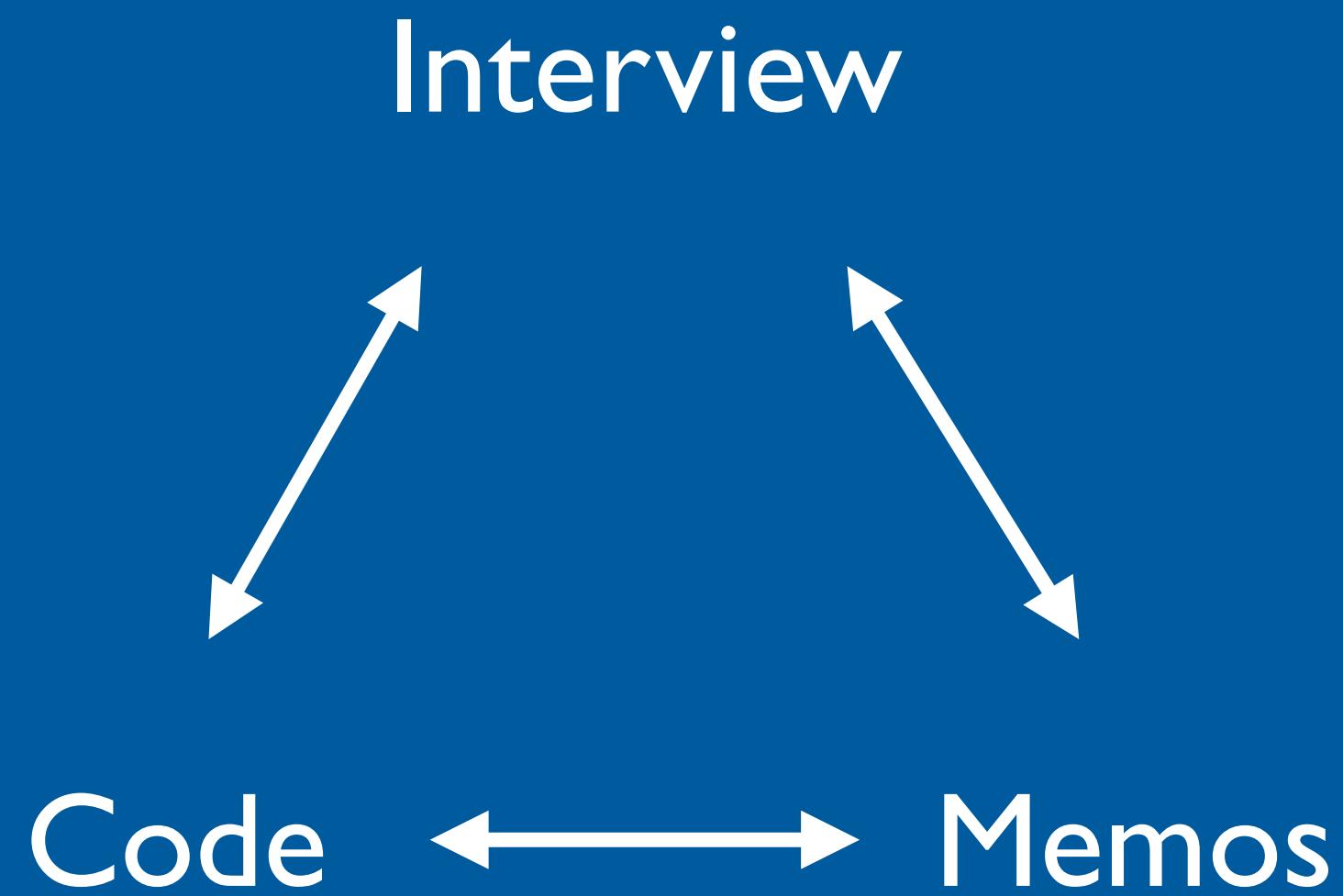
(important for building some basic context /
understanding for our project on qualitative data)

In qualitative research, your goal is to:

- develop a *rich understanding of a complex phenomena* and the **complex interactions between factors**
- uncover a *surprising insight or explanation* that you want to share with others
- communicate a *holistic interpretation or narrative* that helps readers experience “being there”

Ask → [Collect → Organize → Analyze] → Theory

Ask → [Collect → Organize → Analyze] → Theory



Ask → [Collect → Organize → Analyze] → Theory



In our case

- **Ask:** what insights can we glean about career journeys that might be helpful to others?
- **Collect:** podcast interview episodes / transcripts
- **Organize & Analyze:** YOUR HOMEWORK
- **Theory:** a rich picture of some insight related to career journeys

Second part of homework I:

Conduct a thematic analysis of two What-To-Be podcast interview transcripts.

This includes: (1) initial coding of two transcripts, (2) organizing codes into larger themes and subthemes, (3) write a narrative around one theme

Question

What career insights, perspectives or tips do professionals have looking back that might be helpful for a young person who is just beginning their career journey?

members of the Art Center, something similar to open studios, because it's hard to get the traffic because people feel like we're so far away. And we're not as well known as we would hope to be.

David Lee 15:19
Yeah, yeah.

Tina 15:19
You know that I think that's the biggest, to me, that's the most troublesome is to try to get it out there, the advertising, the encouragement for more people to come and see us.

Chris 39:44
Yeah, so it was like, all of these things going on. And she says, 'I've got this house, nobody's staying there. I'll tell you where the key is help yourself.' And I did. I lived there for about a week and a half until she came back from Oregon. And then somebody offered me another place. And I stayed until I could come home. But um, but you know, people just do stuff like that, you know, we get to know each other, she had taken my class a bunch of times, because she worked. And it was, you know, the time was such that she could take it.

David Lee 40:18
Yeah.

Chris 40:18

D David Lee

Weaknesses - "people feel like we're so far away"

Comment

Cancel



D David Lee

Values - close community relationships

Comment

Cancel



Note: only annotate interviewee text!

Code Name	Quotes
W1	
REASONS THEY JOINED	
Difficulties in traditional career search	At the time I joined I didn't have a job and I wasn't having success in the job search so I wanted to try and at least make some money while I continued to look for a job.
Monetary - Money to support career search	Pretty soon after, I realized I could probably make more money on MTurk than I would be able to at the jobs I was applying for and was qualified for.
Monetary - "Making pretty decent money on the site"	
TASK CHOICE	
Hourly wage is the top priority: "I will do almost anything"	
Maximize hourly wage	I mostly do these tasks because they earn me the highest hourly wage and they're not very aggravating or frustrating to do for me personally.
Avoid frustrating tasks	I mostly do these tasks because they earn me the highest hourly wage and they're not very aggravating or frustrating to do for me personally.
Avoid bad requesters - rejection rate	The rejection rate of the requester and how clear the instructions are for the task are also some minor priorities to consider.
Avoid personally invasive tasks	I don't like to do certain tasks that require writing about personal life experiences, or rating faces, as some examples.
Avoid frustrating tasks - clarity of task instructions	The rejection rate of the requester and how clear the instructions are for the task are also some minor priorities to consider.
CHARACTERISTICS OF WORKING ON MTURK	
Low benefits - Per task payment is low	The hourly wage is the most important factor by far. I don't want to waste my time on something only to earn \$8/hr, even if the actual wage is high (\$5+), because it feels exploitative and annoying.
Low benefits - Many tasks on platform below min wage	The relationships with requesters come from submitting a lot of (hopefully) quality work for them and occasionally emailing them with questions about the work, although I usually don't do that so these are pretty limited relationships. I've asked requesters to help clarify instructions on tasks so that I can fine tune my work to what they're looking for.
Power dynamics - strong focus on pleasing requester	
All consuming - "pretty much the entire day"	It's pretty simple, I don't have many life priorities, so I try to work on MTurk as much as possible really....the really lucrative ones at that point.

Example: “What are the perceived benefits and limitations of social media-based #DayInTheLife videos for supporting youth career exploration?”

Theme	Subtheme	Illustrative Quote
Benefits for career identity formation	Provides firsthand depiction of how their life works	Yeah, usually like, since they give kind of like a more personal like picture of what's going on? Like usually I use those videos to kind of like understand, like, what would I be getting myself into, like, if I want to pursue it?
	Facilitates reflection, reaffirmation, and reevaluation of goals	But I think like watching these videos, kind of reaffirms that sense, if that makes sense. Like, oh, coz like, I'm still thinking like, what I want to do post grad. And sort of like, I don't know, it's kind of nice to have, like, some reinforcement on what I think are potential paths for me.
Benefits for behavior change	Reduces barriers through causal, digestible formats	It is a one minute max video. So it's not like it's too much of a commitment. It's just you watch the video and you kind of like, get a general vibe.
	Creates entry points for potential further exploration	It gives you an outlook, it gives you an idea and then it just gives you enough to know if you want to continue looking into it deeply.
	Motivates and inspires lifestyle improvements	Okay, yeah so there's this guy whose name is Singh in USA. And he's like, he got an internship at Microsoft and that was the first one I watched. And then after that, it gave me like, kind of motivation to work more, so I can work at Microsoft too
Limitations from Format, Focus, Context, and Representation	Short-form nature and lack of integration insufficient for decision-making	You can only get so much in 60 seconds. I think that's one limit, especially for like complicated careers. I would say. Like for CEOs, I don't know what CEOs actually do, but I imagine it's complicated
	Nature of social media context not conducive for reflection and follow-up	I mean, I don't think there are any benefits of using Tiktok. Because you get distracted a lot. You know, there will be some funny videos coming in, you would start watching them and you know, lose attention. Even if you're working on something very important. Just one video can change your mind. And you can just get distracted, you know.
	Entertainment / influencer dimension takes away from career focus and realism	TikTok is more geared towards entertainment, that I don't find many videos like that, that are like very, like, have like all this explanation about like, what they do. And like, one of the views I saw on there was more geared towards a lifestyle than the actual like, like lifestyle outside of work than what they do during work
	Lacks representation of or personalization to diverse backgrounds and values	it's always for big tech companies. And I don't, even though I'm a CS major, I actually am not the most interested in working at like, any famed company, because they seem kind of, well, I don't know, corporate.

Table 1. The themes and subthemes pertaining to the Benefits and Limitations of #DayintheLife videos for career exploration

- As you code you begin to look for patterns and connections in your codes
- You ultimately want to define themes & subthemes that convey the insight/theory
 - Think about how your grouping of codes can best reveal the “structure”
 - Your themes need to be coherent,
 - Your themes need to be distinct,

STANDARDS VS. “WE KNOW WHAT WE WANT”
 “GRASSROOTS” COMMITTEE VS. TEACHER INPUT
 INTERDISCIPLINARY VS. PERFORMANCE/PRODUCTION
 “KNOW AND BE ABLE TO DO” VS. “DIFFERENT STRENGTHS”
 “TEACH TO THE TEST” VS. “FUN”
 “TOP-DOWN” VS. BOTTOM-UP
 PRODUCT VS. PROCESS
 “WHO WROTE THIS?” VS. OWNERSHIP
 ADMINISTRATOR VS. TEACHER
 ENDORSEMENT VS. BOYCOTT
 PRESCRIPTION VS. AUTONOMY
 US VS. THEM
 YOU KNOW VS. “WE KNOW”
 PERFORMANCE OBJECTIVES VS. “WORK BACKWARDS”
 ASSESSMENT VS. “HOW DO YOU TEST THAT?”
 BENCHMARKS VS. “I’M NOT GOING TO”
 ROADMAP VS. “CHOOSE YOUR OWN ADVENTURE”
 AIMS TEST VS. CREDITS
 IVORY TOWER VS. INNER CITY

Category 1: Human and Institutional Conflicts – The “Fighters”
Subcategories:
People
Institutions
Political Ideologies

Category 2: Standards and Curriculum Conflicts – The “Stakes”
Subcategories:
Curricula
Arts Standards Development
Testing and Graduation Requirements

Category 3: Results of Conflicts – The “Collateral Damage”
Subcategories:
Exclusion and Marginalization
Teacher Resistance

Category 1: People

Related Codes:
 US VS. THEM
 ADMINISTRATOR VS. TEACHER

Category 2: Institutions

Related Codes:
 DISTRICT VS. SCHOOL
 STATE VS. DISTRICT
 STATE SCHOOL BOARD VS. ARIZONA UNIVERSITIES
 URBAN VS. RURAL
 THEATRE CONFERENCES VS. THESPIAN SOCIETY

Category 3: Political Ideologies

Related Codes:
 REPUBLICAN VS. DEMOCRAT
 CONSERVATIVE VS. LIBERAL
 IVORY TOWER VS. INNER CITY

Category 4: Curricula

Related Codes:
 YOUR WAY VS. OUR WAY
 LANGUAGE ARTS VS. THEATRE STANDARDS
 “BASICS” VS. THE ARTS
 PERFORMANCE OBJECTIVES VS. “WORK BACKWARDS”
 “KNOW AND BE ABLE TO DO” VS. “DIFFERENT STRENGTHS”
 INTERDISCIPLINARY VS. PERFORMANCE/PRODUCTION
 CLASSROOM VS. EXTRA-CURRICULAR
 PRODUCT VS. PROCESS
 ART FORM VS. LIFE FORM

Concept 1: US VS. THEM [teachers vs. all other personnel, such as principals, school districts, the state department of education, state universities, etc.]

Concept 2: YOUR WAY VS. OUR WAY [mandated yet poorly written state standards vs. experienced educators working at the local level who know their art and their students]

Concept 3: CON-FORM VS. ART-FORM [conformity to prescribed and standardized curricula vs. creative expression in the subject area and its practice]

Logistics

- By tonight, we will have the following posted:
 - Canvas
 - Lecture recording and slides
 - HW 1 assignment details
- Send questions to the course Slack so we can answer them for everyone
- If you have a personal question, email TAs for help
 - Kehua Lei (TA), klei4@ucsc.edu - course logistics
 - Hayat Malik (TA), haamalik@ucsc.edu - homework content

Remember!!!

- Intro survey due tonight
 - We need this to form teams
- HW I (Business strategy, generative AI, thematic analysis) due Saturday 11:59pm