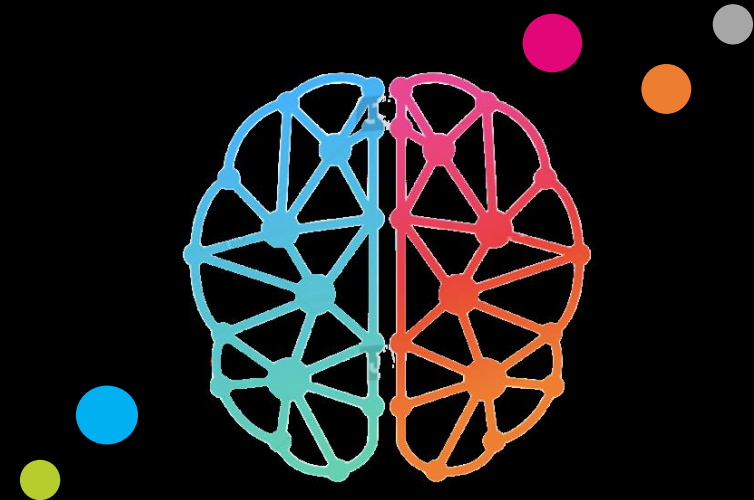# Design Thinking Fundamentals
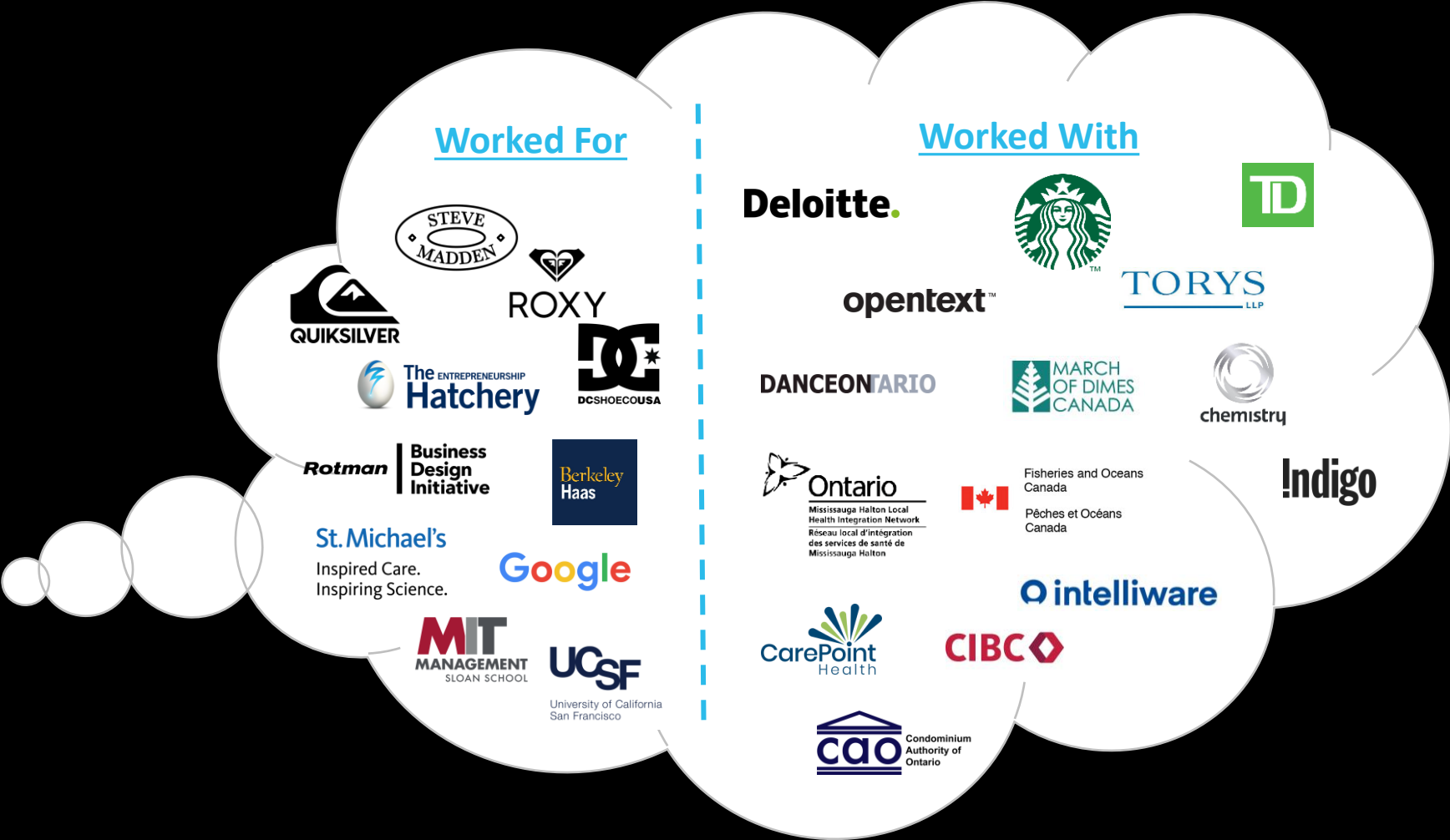## Going Beyond Big Data

FEBRUARY 22, 2024

Anjana Dattani, MBA
Instructor – Business Design
Rotman School of Management

HI, I'M ANJANA.

WARM-UP: THOUGHT EXPERIMENT

As the CEO of Starbucks, you need to decide which one of two stores you should shut down.

How would you make this decision?

What data would you use?

WARM-UP: THOUGHT EXPERIMENT

- **Profit**
- **Year-on-year sales (YoY)**
- **Footfalls**
- **Average Transaction Value (ATV)**
- **Units per transaction (UPT)**
- **Sales Per Sqft Per Day (PSFPD)**
- **Lease expiry**
- **Costs**
- **Etc.**

WARM-UP: THOUGHT EXPERIMENT

DATA SCIENCE APPROACH

- **Profit**
- **Year-on-year sales (YoY)**
- **Footfalls**
- **Average Transaction Value (ATV)**
- **Units per transaction (UPT)**
- **Sales Per Sqft Per Day (PSFPD)**
- **Lease expiry**
- **Costs**
- **Etc.**

WARM-UP: THOUGHT EXPERIMENT

DATA SCIENCE APPROACH

- **Profit**
- **Year-on-year sales (YoY)**
- **Footfalls**
- **Average Transaction Value (ATV)**
- **Units per transaction (UPT)**
- **Sales Per Sqft Per Day (PSFPD)**
- **Lease expiry**
- **Costs**
- **Etc.**

DESIGN THINKING APPROACH

Iconic Starbucks store in downtown Vancouver to close

One of the oldest Starbucks stores in Vancouver, at the southwest corner of Robson and Thurlow streets, is closing. Starbucks Coffee Co.

Nelson Bennett
Apr 30, 2012 11:00 PM

WARM-UP: THOUGHT EXPERIMENT

DATA SCIENCE APPROACH

- Profit
- Year-on-year sales (YoY)
- Footfalls
- Average Transaction Value (ATV)
- Units per transaction (UPT)
- Sales Per Sqft Per Day (PSFPD)
- Lease expiry
- Costs
- Etc.

DESIGN THINKING APPROACH

Design Research Methods (Ethnography):

- Observational Research
- Empathy Interviews

WARM-UP: THOUGHT EXPERIMENT

DATA SCIENCE APPROACH

- Profit
- Year-on-year sales (YoY)
- Footfalls
- Average Transaction Value (ATV)
- Units per transaction (UPT)
- Sales Per Sqft Per Day (PSFPD)
- Lease expiry
- Costs
- Etc.
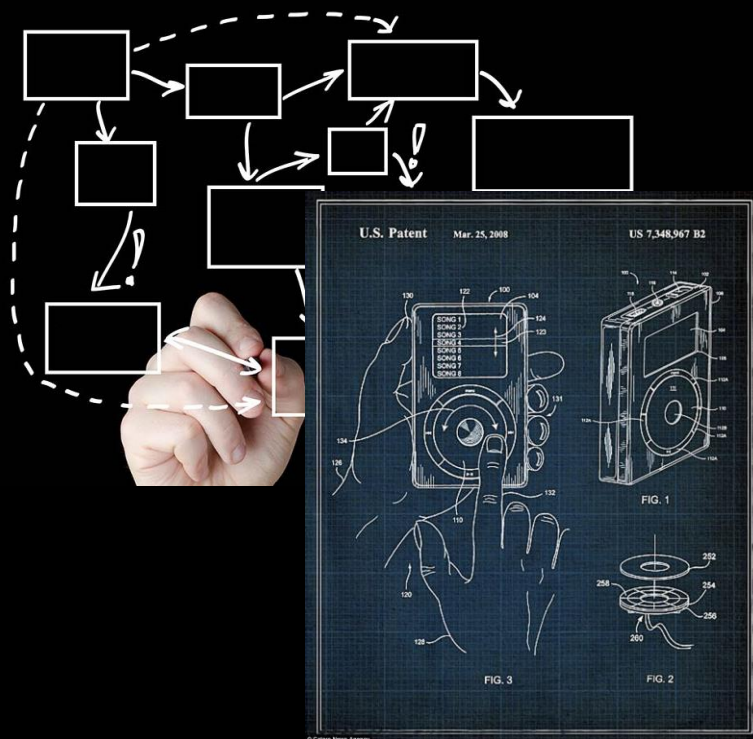
BIG DATA = "what" + maybe "how"

DESIGN THINKING APPROACH

Design Research Methods (Ethnography):
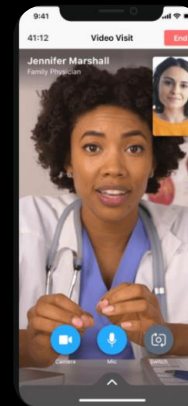- Observational Research
- Empathy Interviews

THICK DATA = "why"

DESIGN.

DESIGN.

verb (process)

noun (output)

NETFLIX BUSINESS MODEL

GARYFOX.CO

KEY PARTNERS ♥	KEY ACTIVITIES ⚙	VALUE PROPOSITIONS 💎	CUSTOMER RELATIONSHIPS ♡	CUSTOMER SEGMENTS ⊚
• Investors • Media Producers • Film Maker Guilds • Cinemas, Theaters • TV Networks • Amazon AWS • Consumer Electronic Companies • Regulators	• Technology R&D • Content licensing • Content production • Content distribution • Data anlaytics • Sales and marketing	• 24/7 On Demand Entertainment • View high-definition shows and movies • Stream content • Unlimited access • Netflix Orginal • 30 Day free trial • No commercials	• Self service • On-demand • Ease of use	Micro-segmentation • 2000 preference clusters Usage • usage segmentation Geographical • content/languages
	KEY RESOURCES 🔧 • Brand • Apps/website • Platform • Employees • Film Makers/Producers • Prizes/Awards		**CHANNELS** ⊕ • Any Device • Netflix App • Word of mouth • Online advertising • Offline advertising • Social Media	

COST STRUCTURE 🔥		REVENUE STREAMS 📊
• Production • Research and Development • Licensing • Infrastructure - AWS	• Marketing • Payment Processing Fees • General/Admin	

DESIGN-DRIVEN INNOVATION

DESIGN-DRIVEN PROBLEM SOLVING

Images:
https://www.scientificamerican.com/sciam/assets/Image/articles/4779875780_bb93bc2fd2_z.jpg
https://content.fortune.com/wp-content/uploads/2020/03/DES04.20.004.Eames-chair.jpg?w=1024
https://static.wixstatic.com/media/54a94b_f8dc03c16b9c4359902935bc466ee631~mv2.jpg/v1/fill/w_640,h_426,al_c,q_90/54a94b_f8dc03c16b9c4359902935bc466ee631~mv2.jpg
https://www.restaurant-hospitality.com/sites/restaurant-hospitality.com/files/styles/article_featured_retina/public/DoorDash%20Dasher%20Bike.jpg?itok=E_HSCgSv

11

WAYS OF PROBLEM SOLVING

TRADITIONAL WAY OF PROBLEM SOLVING

COMPANY PROBLEM

SOLUTION DEVELOPMENT

?

WAYS OF PROBLEM SOLVING

TRADITIONAL WAY OF PROBLEM SOLVING

? → COMPANY PROBLEM → SOLUTION DEVELOPMENT
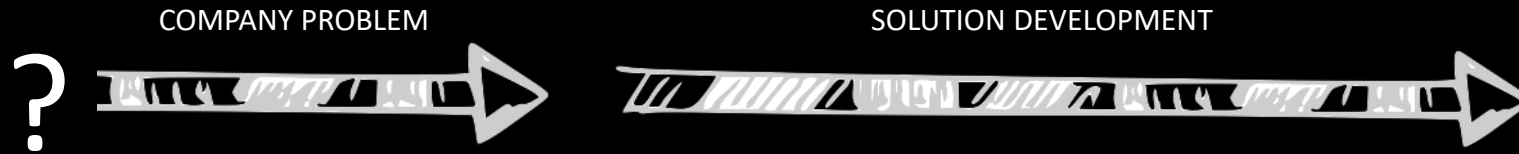
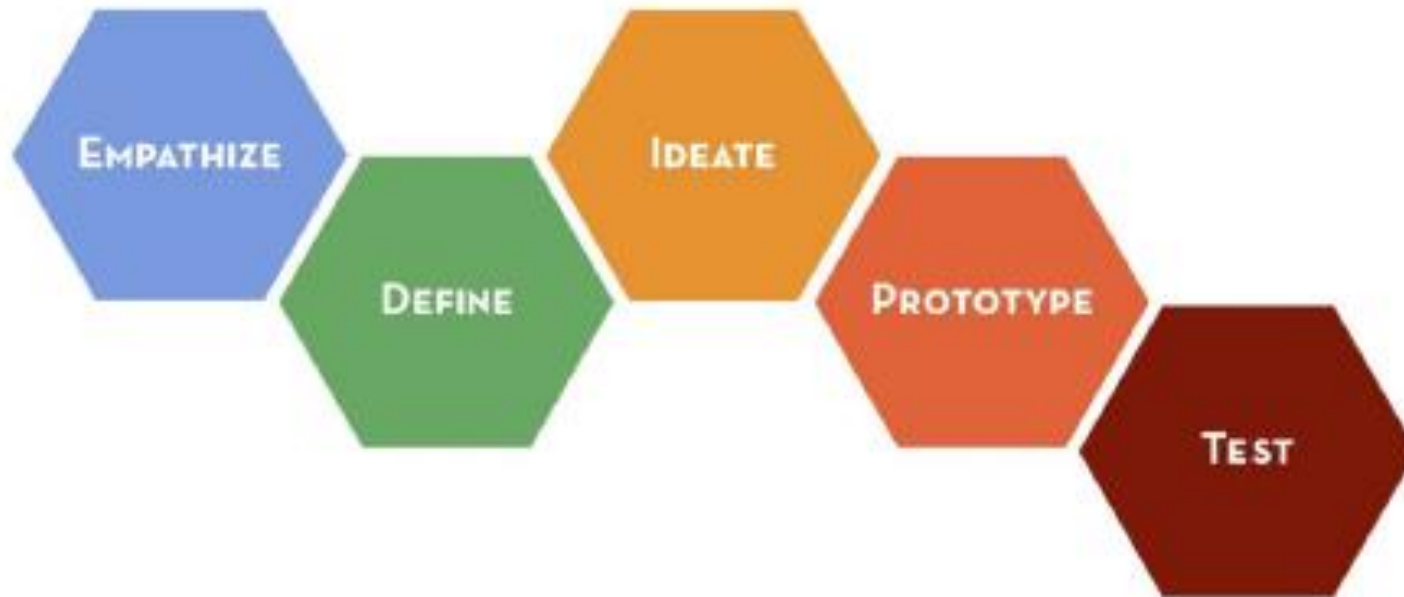**DESIGN-DRIVEN WAY OF PROBLEM SOLVING**

?

START   FIND   FRAME   SOLVE

Better understand the what, why and how of the problem

Gather evidence to understand and define your challenge.

Generate, test, and evaluate ideas to solve your challenge.

Implement your innovative solution while learning along the way.
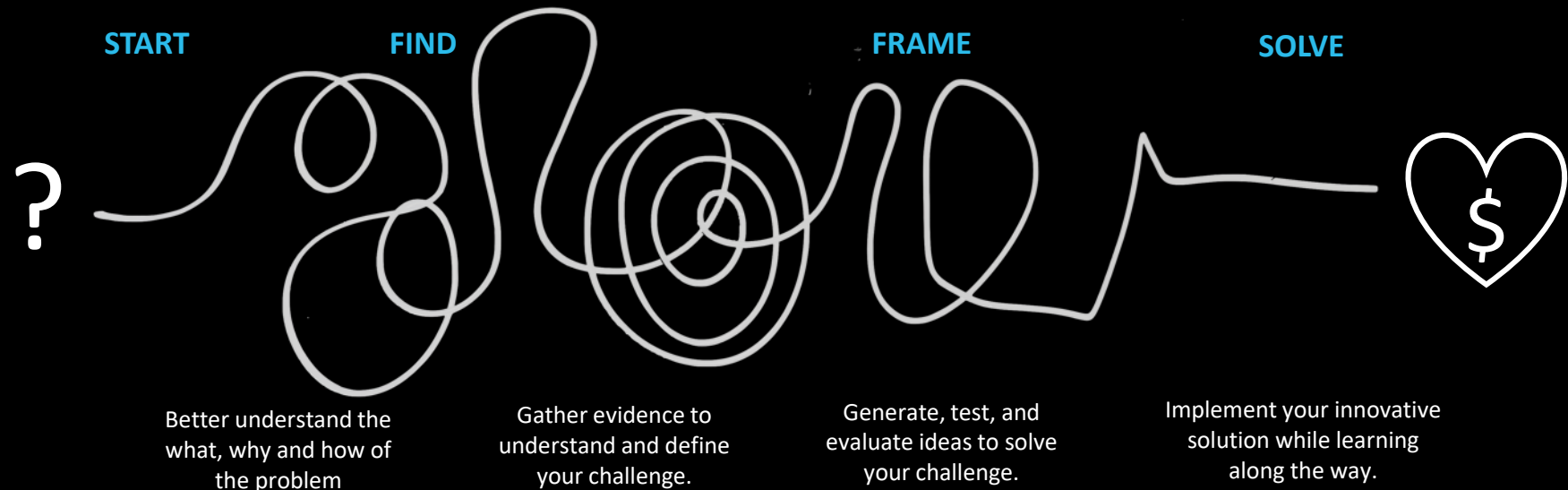
DESIGN-THINKING PROCESS: VERSIONS

STANFORD DESIGN THINKING
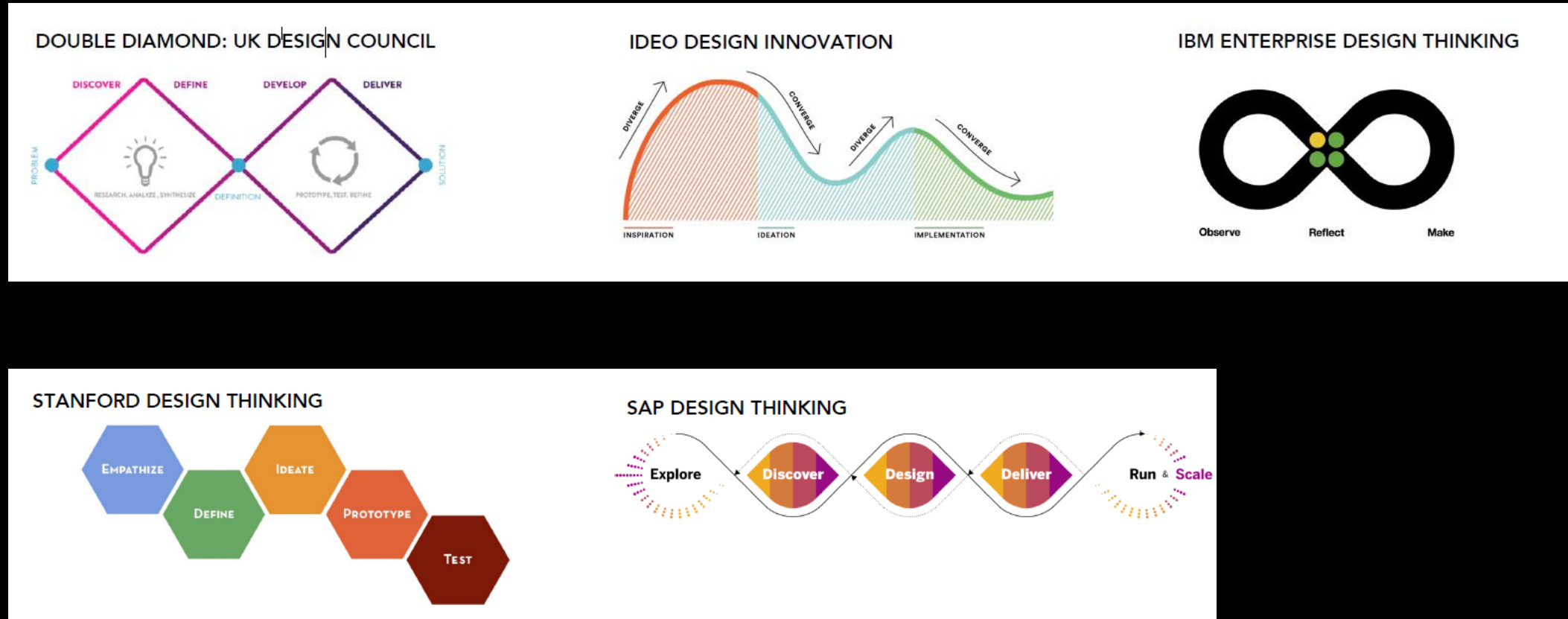
EMPATHIZE — DEFINE — IDEATE — PROTOTYPE — TEST

DESIGN-THINKING PROCESS: VERSIONS

WAYS OF THINKING: GE EXAMPLE

Problem: poor quality images
Solution: new MRI scanner (technology-led)
Solves image capture and diagnostics, reduces
hospital costs for repeat scans.

DESIGN AN MRI SCANNER

WAYS OF THINKING: GE EXAMPLE

Problem: poor quality images
Solution: new MRI scanner (technology-led)
Solves image capture and diagnostics, reduces
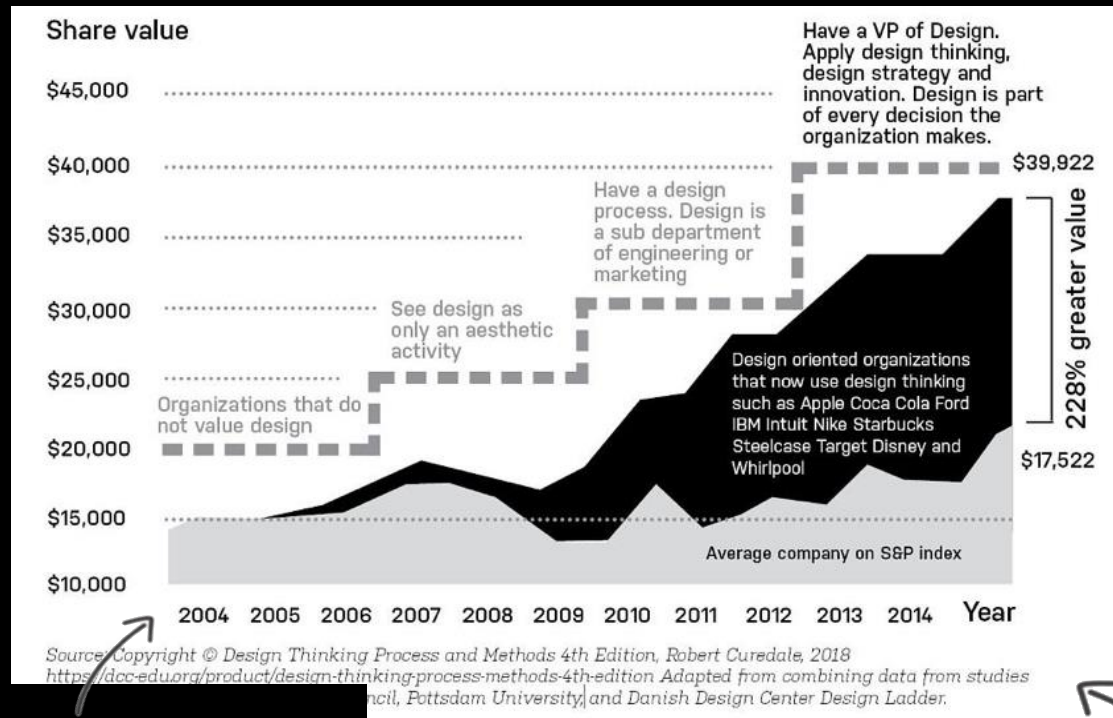hospital costs for repeat scans.

Problem: patient movement, anxiety + sedation
Solution: a new experience (human-centered
led). Solves human needs + hospital needs
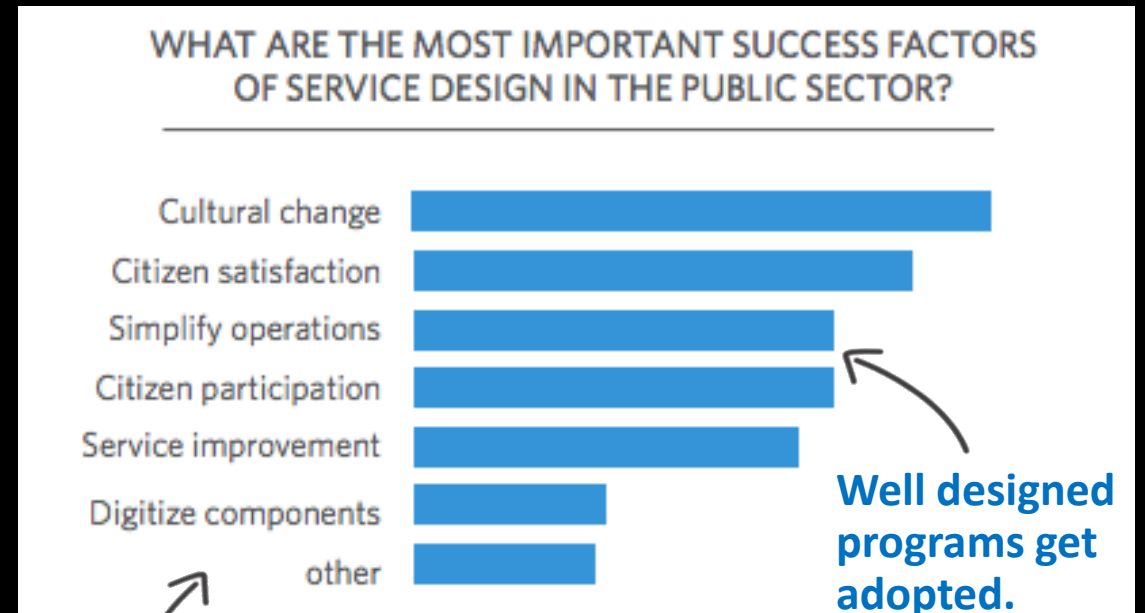(cost) and creates a new service offering.

DESIGN AN MRI SCANNER

DESIGN A BETTER MR EXPERIENCE

BUSINESS VALUE OF DESIGN: RETURN ON IMPACT (ROI)


Well designed products sell themselves

Well designed organizations adapt, drive impact + profit.

Well designed programs get adopted.

Source: https://www.mckinsey.com/business-functions/mckinsey-design/our-insights/the-business-value-of-design
Source: https://www.service-design-network.org/uploads/sdn-impact-report_public-sector.pdf

DESIGN THINKING TOOLS: INNOVATOR'S DECISION-MAKING TOOLS

- PROJECT REQUIREMENTS BRIEF
- DATA ANALYSIS TOOLS
- SURVEYS + POLLS
- SPREADSHEETS
- FORMULAS
- MVP (FINAL CONCEPT)
- BLUEPRINTS
- REPORTS
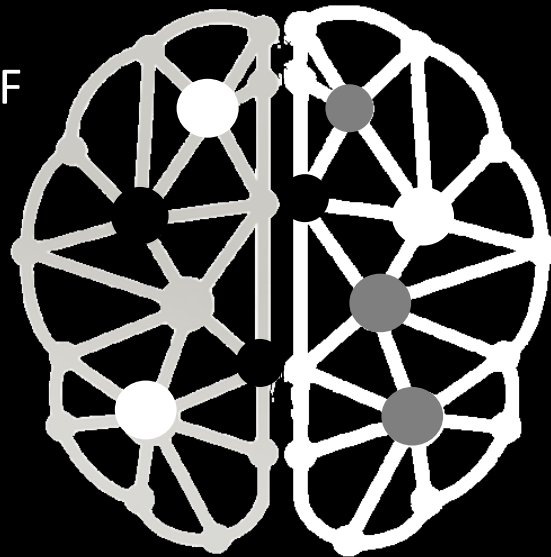
- INNOVATION DESIGN BRIEF
- NEEDS ANALYSIS TOOLS
- QUESTIONNAIRES + INTERVIEWS
- FRAMEWORKS
- WHITEBOARDS
- CONCEPTS + PROTOTYPES
- CUSTOMER JOURNEY MAPS
- STORIES + SCENARIOS

ANALYTICAL (CONVERGENT) THINKING   >   <   CREATIVE (DIVERGENT) THINKING

DESIGN DASH: LET'S PRACTICE!

Your original business challenge is:
"How Might We (Starbucks) attract more customers to our brand?"

STEP 1: In your teams, list functional and emotional needs that your stakeholder has.
Functional = convenience, time, price, etc. Emotional = need to feel appreciated, need for motivation, etc.

Room 1 + 2: Immigrant First Year University Students
Room 3 + 4: Single Moms
Room 5 + 6: Senior Managers at a Bank
Room 7 + 8: Starbucks front-line workers

STEP 2: Reframe the original business problem based on the given format.
STEP 3: As a team, brainstorm ideas based on your revised problem statement. Vote on your best idea.

STEP 4: Draw quick sketches or describe your idea. Get ready to present (1 minute per team).

DESIGN DASH: LET'S PRACTICE!

DESIGN THINKING DASH

1 LIST NEEDS

Your Stakeholder: _____
(e.g. single moms, senior managers at a bank, etc.)

Functional Needs
(e.g., price, convenience, speed)

_____

_____

_____

_____

Emotional Needs
(e.g., need to feel appreciated, motivated, etc.)

_____

_____

_____

_____

2 RE-FRAME PROBLEM

Initial Problem:
How Might We (Starbucks) attract more customers to our brand?

Reframed Problem *(add your iterations here):*

v.1: The problem we are trying to solve for
_____

is their need for _____
_____
_____

v.2: The problem we are trying to solve for
_____

Is their need for _____
_____
_____

FINAL DRAFT: The problem we are trying to solve for
_____

is their need for _____
_____
_____

3 IDEATE + PROTOTYPE

Quick Prototype of idea

Name and Description of Idea:

_____

_____

_____

_____

_____

_____

_____

SHAREBACK

Each team presents:
- **Reframed Problem Statement**
- **Idea + Sketch**

(1 min per team)

WHAT ARE YOUR KEY TAKEAWAYS FROM TODAY?

DO YOU HAVE ANY QUESTIONS?

THANK YOU

Anjana Dattani, MBA
Instructor – Business Design
Rotman School of Management, University of Toronto.