

- IBM Design Management System

MICHAEL HUANG • PRODUCT DESIGN INTERN • SUMMER 2018

*DISCLAIMER: THIS DECK HAS BEEN MODIFIED FOR NDA. NONE OF THE FOLLOWING WORK
CONSTITUTES AN ACCURATE REFLECTION OF THE CURRENT STATE OF DESIGN AT IBM.

- 01** Intro & Context
- 02** Generative Research
- 03** Product Iterations & Learnings
- 04** Concept Prototype
- 05** Interaction & Visual Design
- 06** Evaluation & Roadmap
- 07** Reflections

Team

Alex · Front-End Development Intern

Katelyn · Product Management Intern

Michael · Product Design Intern

Olivia · Graphic Design Intern

Aneesh · Product Management Intern

Timeline

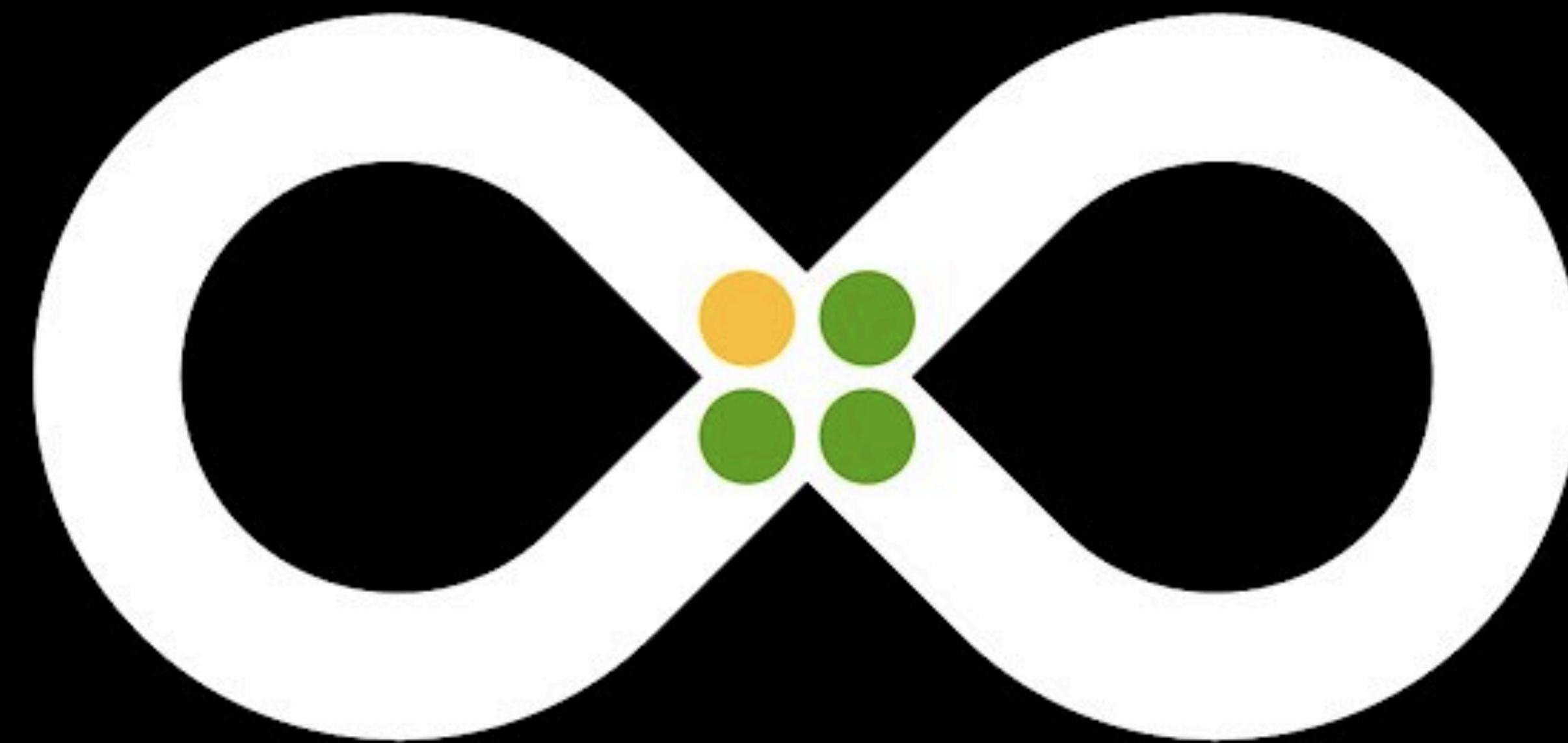
8 weeks



How might we provide IBM's design
directors with greater visibility into
how their teams are doing?

The Loop >

Understand users' needs and deliver outcomes continuously.



Observe >

Get to know people, uncover their needs, test your ideas.

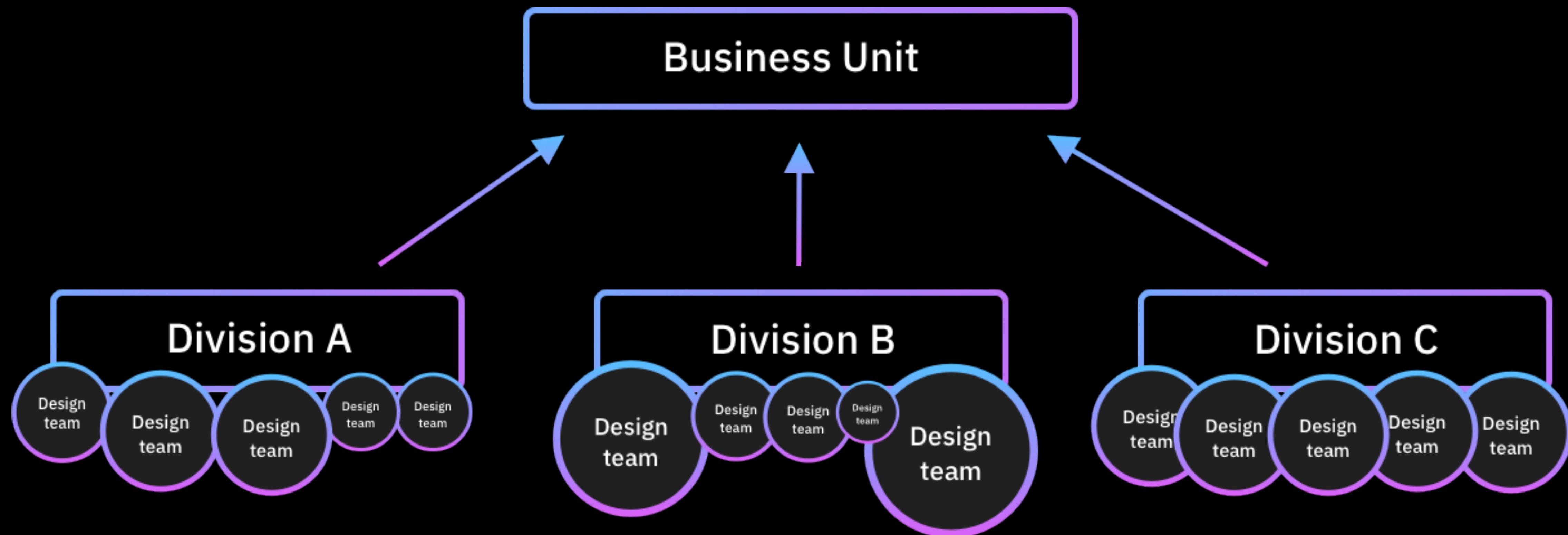
Reflect >

Build understanding, form intent, commit to decisions.

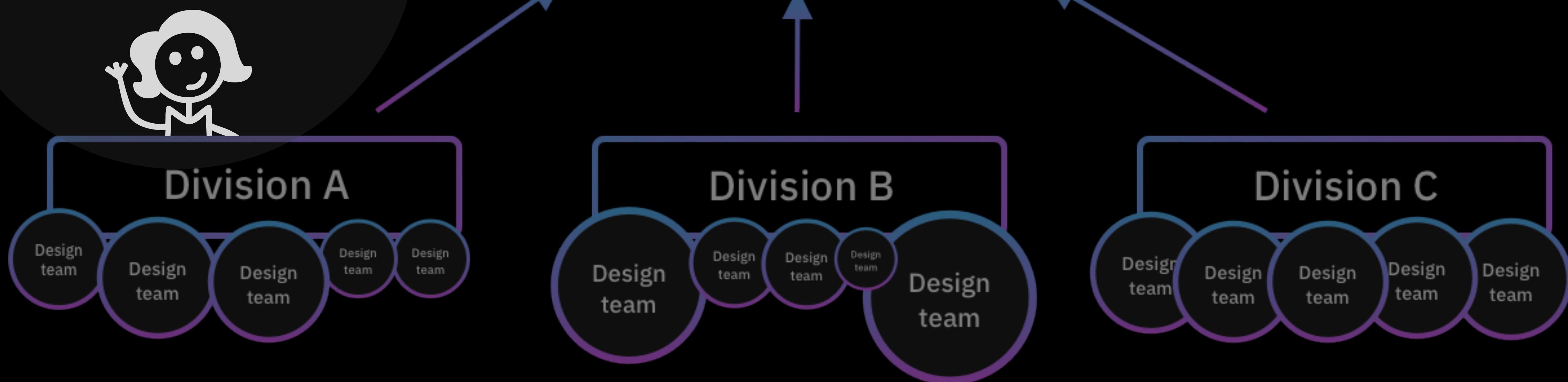
Make >

Explore ideas, prototype possibilities, drive outcomes.

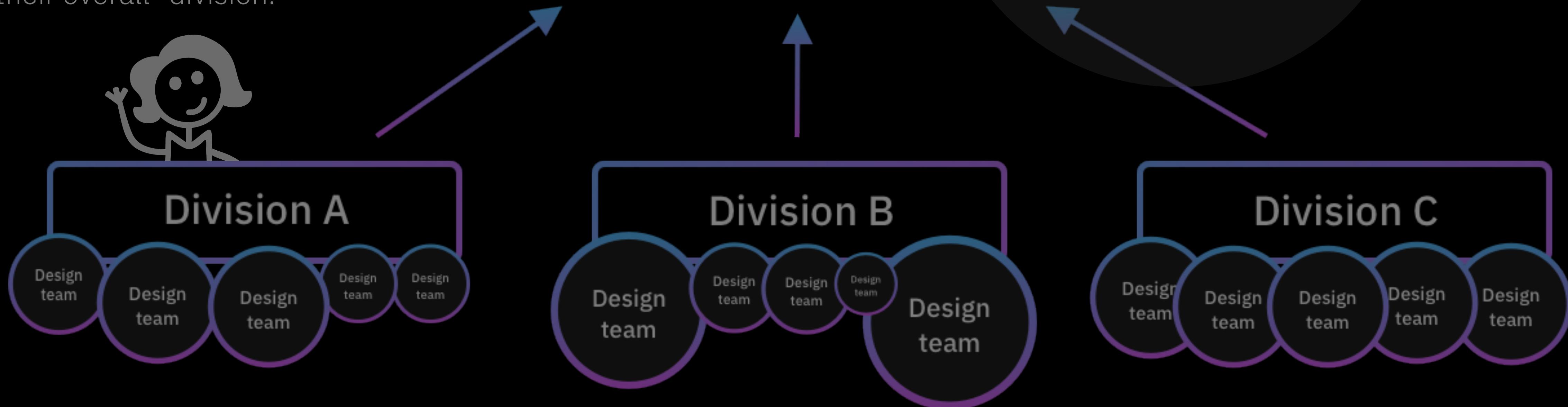
01 How is design organized?



Design Director: User in focus.
Manages several teams within
their overall “division.”



Design Director: User in focus.
Manages several teams within
their overall “division.”



General Manager:
Key stakeholder.
Approves financing
and staffing asks for
specific teams and
the overall division.

As a design director, I want to understand the health and performance of my teams, so I can be informed about financing and staffing needs.

Enable design directors to reduce time spent and inefficiencies in operations management, increasing bandwidth for other essential business functions.

- Generative Research

5

DESIGN DIRECTORS

13

STAKEHOLDERS

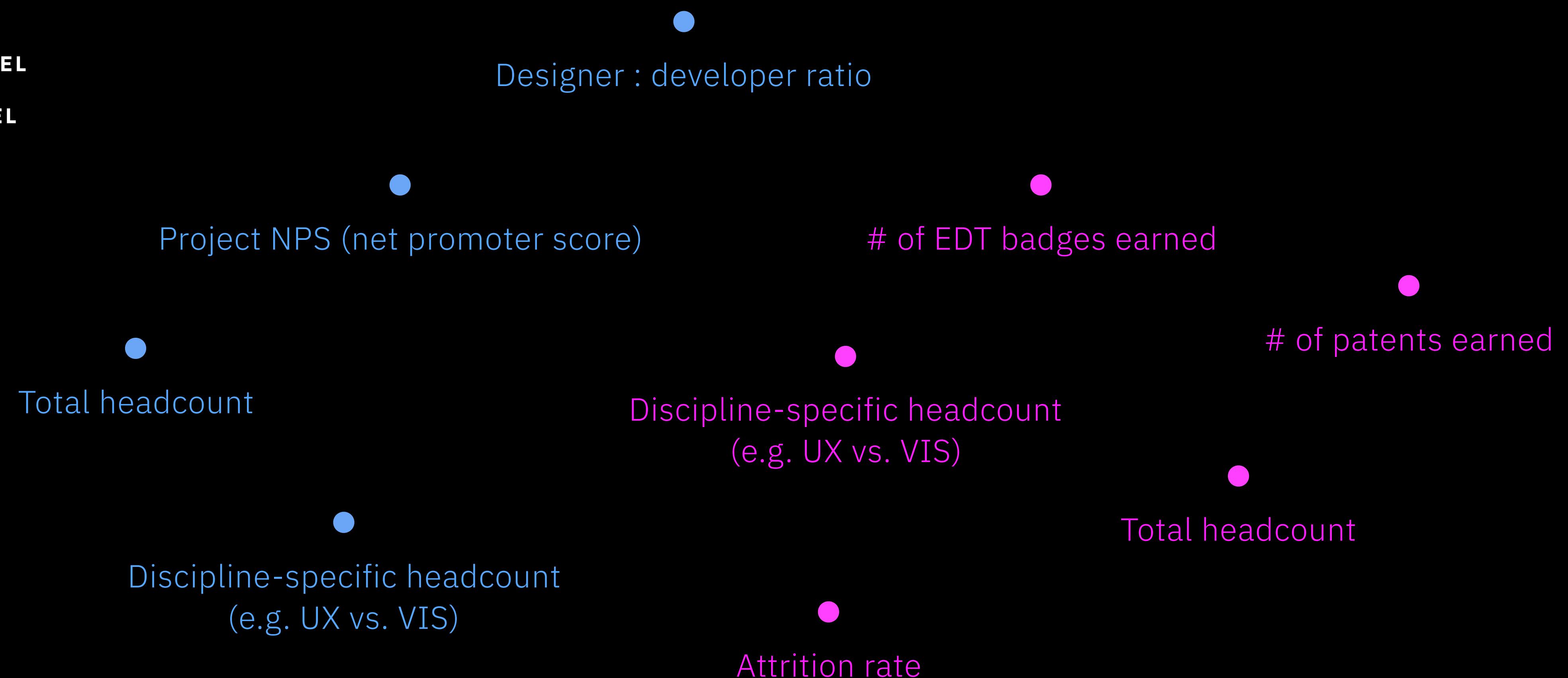
PAIN POINT

Design directors' access to data about their teams is **decentralized and fragmented**, making it **difficult to compile and organize** data efficiently.

DATA INCLUDES...

DIVISION-LEVEL

PROJECT-LEVEL



PAIN POINT

There is **no consistent way to track or update** data, resulting in a **lack of confidence** in its validity and usefulness for informing quarterly investment decisions.

PAIN POINT

Design directors **struggle to translate** raw, project-level metrics into **specific, actionable insights** for staffing and financing investments towards their teams.

Product Iterations & Learnings

PRODUCT ITERATION 1 ■

Designing for Scale

PAPER PROTOTYPE

IBM

Search a

REPORTS

- CIO Design
- Cognitive Solutions
- Digital Business Group
- GTS

Hybrid cloud

Analytics

- Business Analytics
- ML Offerings

► Industry Platform

► Services

► Systems

► Watson & Cloud
PlatformDIVISION
Security

(log in > security)

Last updated Jun

Security Cloud Platform

Guardian Analyzer

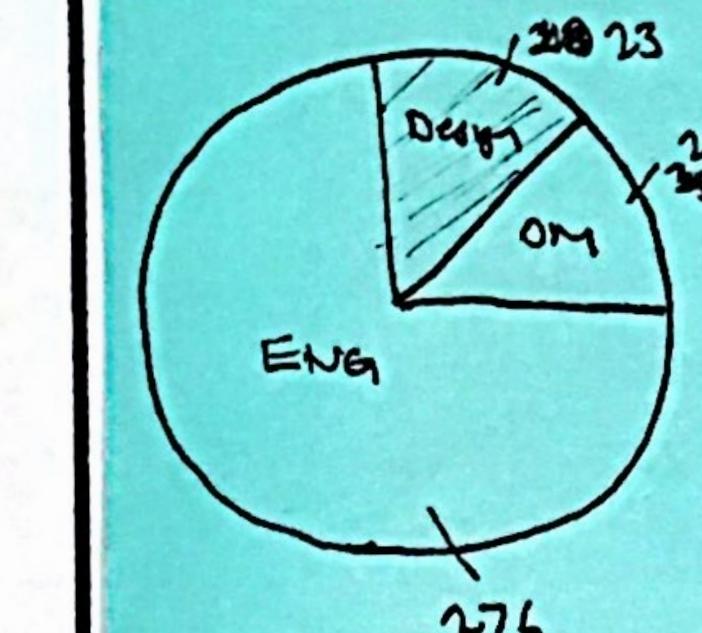
Security + anal

PEOPLE

clickable, people link to each project
(load details)

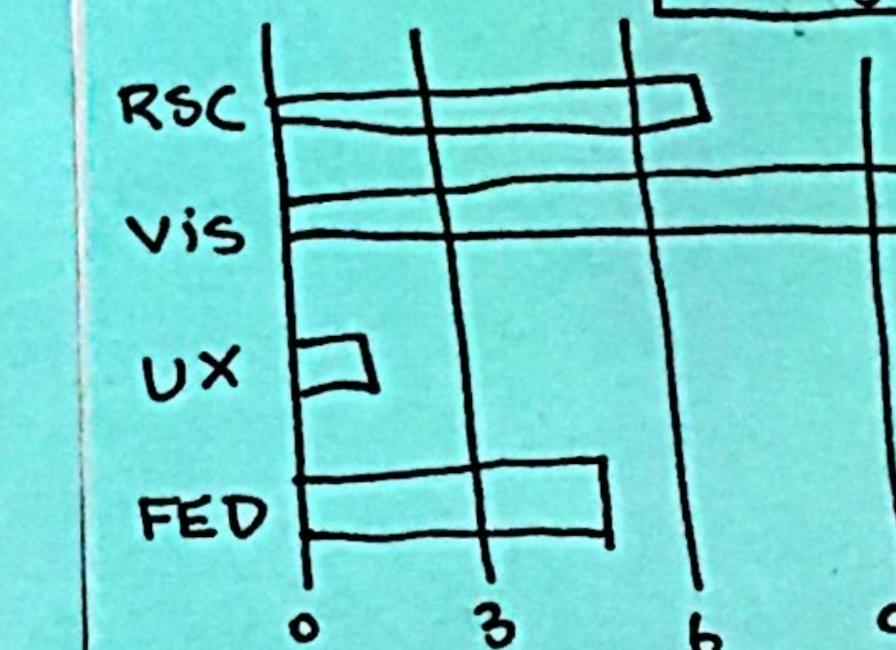
Overview

Total: 322



Designers

Total: 23

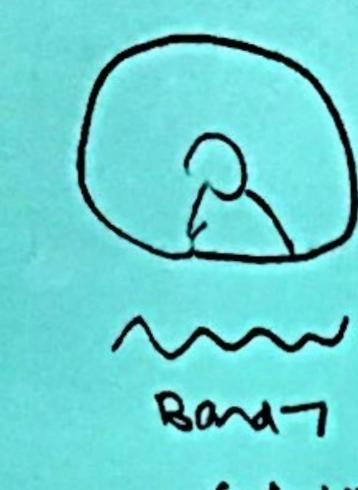
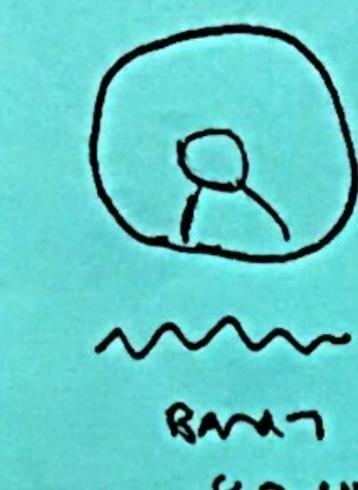


Filter by:

 location
 band
 skillset
 demographic

Experiences > Di Reps
Appointments: 7
Bob Schmidt
Awards: 7
New awards
Patents: 0
Hot New Thin
Badges: 0
+23, total 170
20 proj.
3 creator

Rising stars



“A design director might be in charge of a few projects **or over a dozen**... I need to know how any one of my teams is doing at all times.”



HAIDY FRANCIS

Design Director, IBM Security

IBM

Division Security > Security

Last updated Jun 2024

Search a

REPORTS

- CIO Design
- Cognitive Solutions
- Digital Business Group
- GTS
- Hybrid Cloud

Analytics

- Business Analytics
- ML Offerings

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- Services
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- Watson & Cloud Platform

Security Cloud Platform

Guardian Analyzer

Security + ...

PEOPLE

clickable, people link to each project
(Load details)

OVERVIEW

Total: 322

Design: 23
OM: 23
ENG: 23
RSC: 276

DI: ENG 6:12
D: OM 6:11

Designers

Total: 23

RSC VIS UX FED

Filter by: location band skillset demographic

Appointments: 7 Bob Schmidt

Awards: 7 New awards

Patents: 8 Hot New Thin

Badges: 7 +23, total 170 20 proj. 3 creator

RISING STARS

Band 6 SCP-UX Band 7 SLP-FBD Band 7 SCP-UX Band 7 GA-UX

Band 7 SCP-FBD

PRODUCT ITERATION 2 ■■

Information Hierarchy & Granularity

CARD SORTING

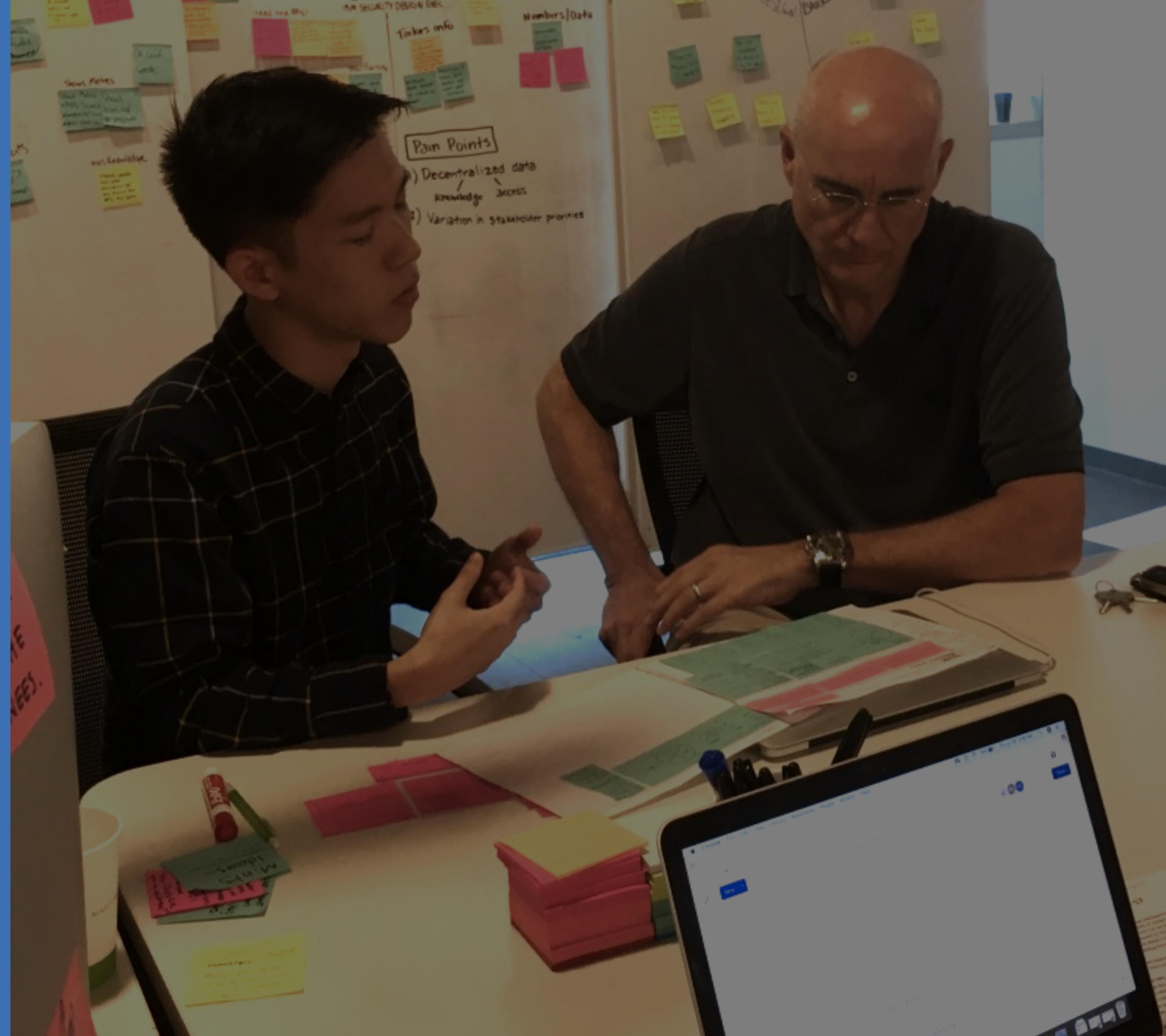


“ It’s not enough just to see the raw data... a design director needs to **connect this to a bird’s-eye view** of how things are going in their org.”



PHIL GILBERT

General Manager, IBM Design



- Concept Prototype

PAIN POINT

Design directors' access to data about their teams is **decentralized and fragmented**, making it **difficult to compile and organize** data efficiently.

1

Introduce a connected platform that fetches data from internal HR systems, enabling design directors to easily **access and track** metrics about their teams in **one touchpoint**.

Click the screen to play on PDF.



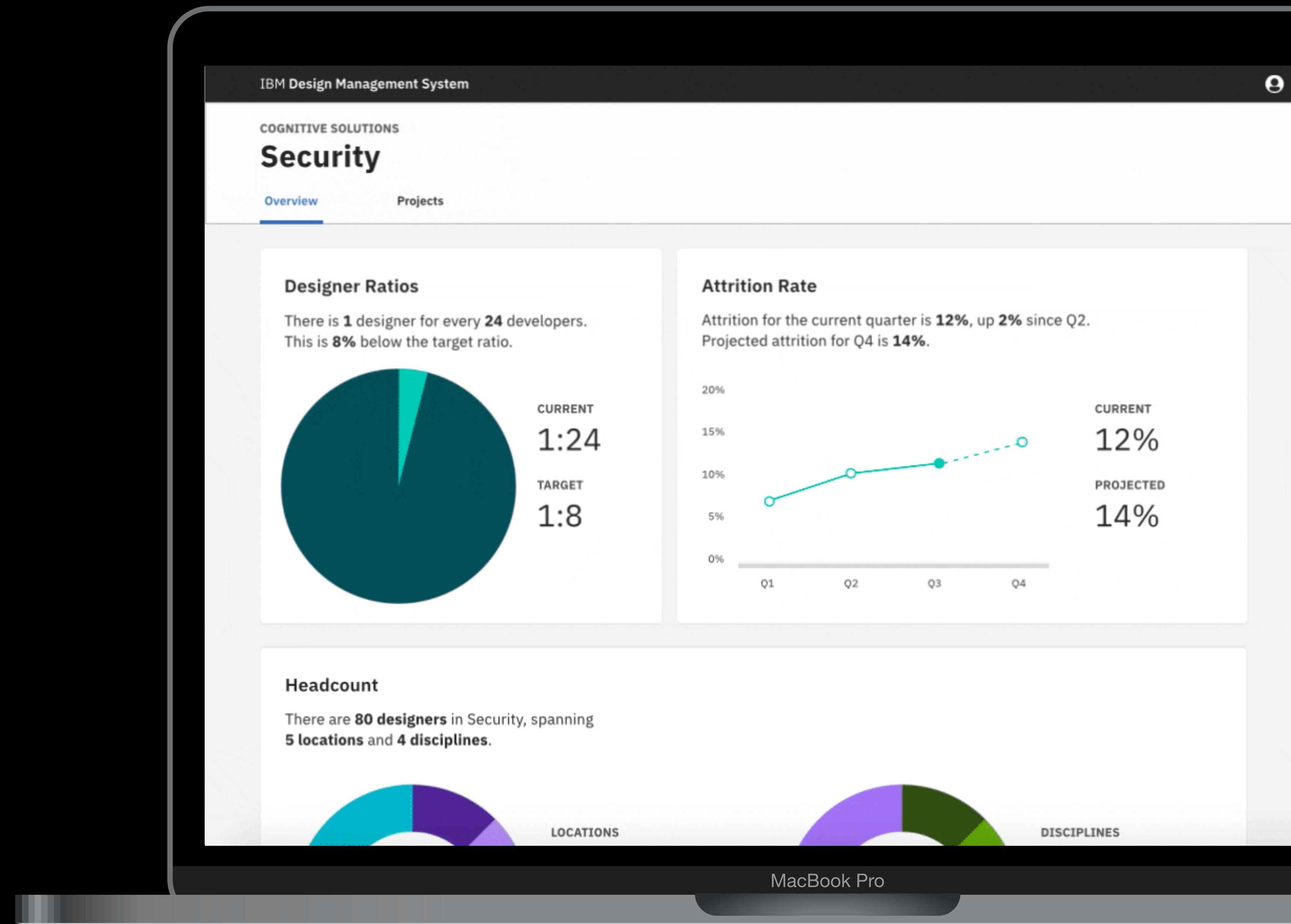
PAIN POINT

There is **no consistent way to track or update** data, resulting in a **lack of confidence** in its validity and usefulness for informing quarterly investment decisions.

2

Enable design directors to **track the recency** of their data and **update ongoing projects** with new information, improving confidence in the validity and accuracy of their data.

Click the screen to play on PDF.



PAIN POINT

Design directors **struggle to translate** raw, metrics into **specific, actionable insights** for staffing and financing investments towards their teams.

3

Enable design directors to **pinpoint projects** with high staffing needs, while being able to **deep dive into them** to make specific, actionable, and data-informed recommendations.

Click the screen to play on PDF.

The screenshot shows a web-based application titled "IBM Design Management System" under "COGNITIVE SOLUTIONS". The main heading is "Security". Below it, there are two tabs: "Overview" and "Projects", with "Projects" being the active tab. The title "All Projects" is displayed above a table. The table has columns for Name, Product, # of Designers, Design Gap, Staffing Level, Designers : Developers, Net Promoter Score, and an ellipsis column. There are ten rows of data, each representing a project. The first row is highlighted in light blue. The staffing level is indicated by colored dots: green for 100%, yellow for 50%, red for 30%, and dark red for 0%. The staffing level for Project 4 is red (0%), while others range from 50% to 100%.

Name	Product	# of Designers	Design Gap	Staffing Level	Designers : Developers	Net Promoter Score	...
ADX SecureVault	ABC	10	0	● 100%	1:8	50	...
Cloud Security	DEF	3	3	● 50%	1:16	10	...
Guardium Analyzer	XYZ	3	7	● 30%	1:24	-30	...
Project 4	DEF	0	2	● 0%	0:24	-30	...
Project 5	ABC	2	2	● 50%	1:16	20	...
Project 6	ABC	4	4	● 50%	1:18	0	...
Project 7	—	4	4	● 50%	1:12	—	...
Project 8	ABC	2	0	● 100%	1:9	40	...
Project 9	ABC	2	2	● 50%	1:14	15	...
Project 10	—	3	3	● 50%	1:10	—	...

MacBook Pro

- Interaction & Visual Analysis

DESIGN DETAILS

Overview

IBM Design Management System

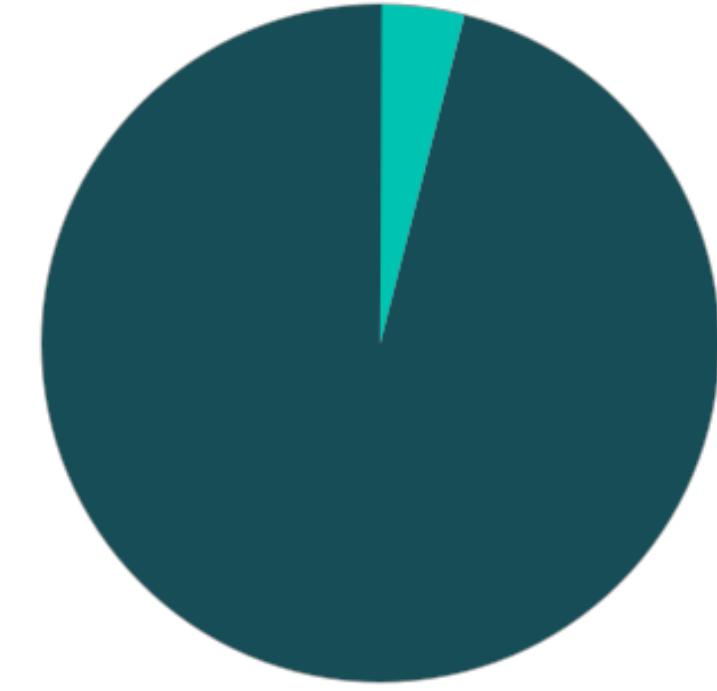
COGNITIVE SOLUTIONS

Security

Overview Projects

Designer Ratios

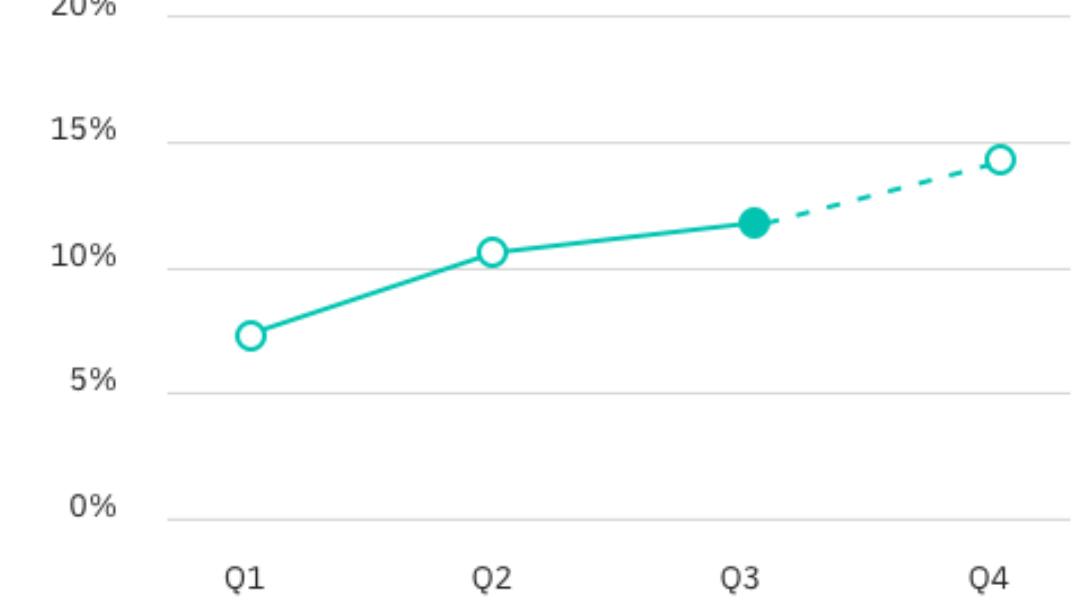
There is **1** designer for every **24** developers. This is **8%** below the target ratio.



CURRENT	TARGET
1:24	1:8

Attrition Rate

Attrition for the current quarter is **12%**, up **2%** since Q2. Projected attrition for Q4 is **14%**.



QUARTER	CURRENT	PROJECTED
Q1	7%	
Q2	10%	
Q3	11%	
Q4	14%	14%

Headcount

There are **80 designers** in Security, spanning **5 locations** and **4 disciplines**.

MacBook Pro

Card Components

- Partition data into distinct groupings
- Large # callouts assigned visual prominence through size & weight
- Scalable as more categories are added

IBM Design Management System

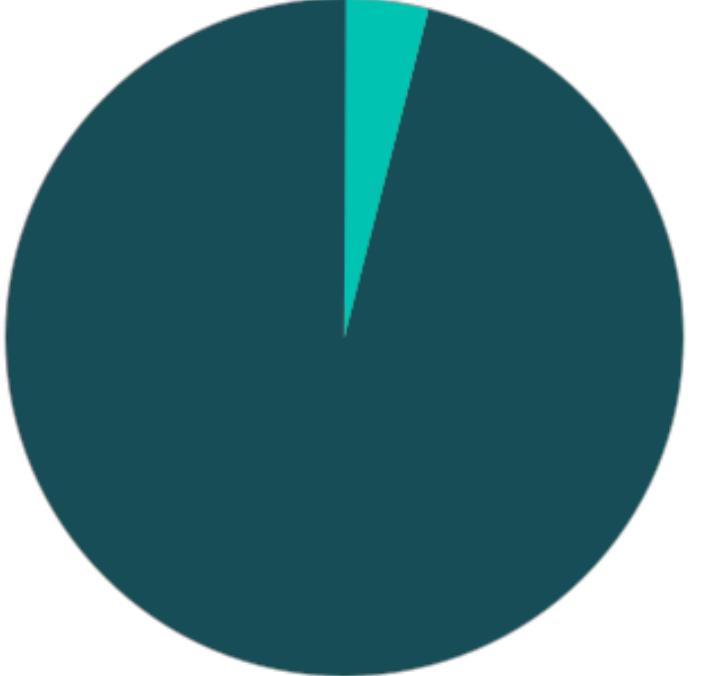
COGNITIVE SOLUTIONS

Security

Overview Projects

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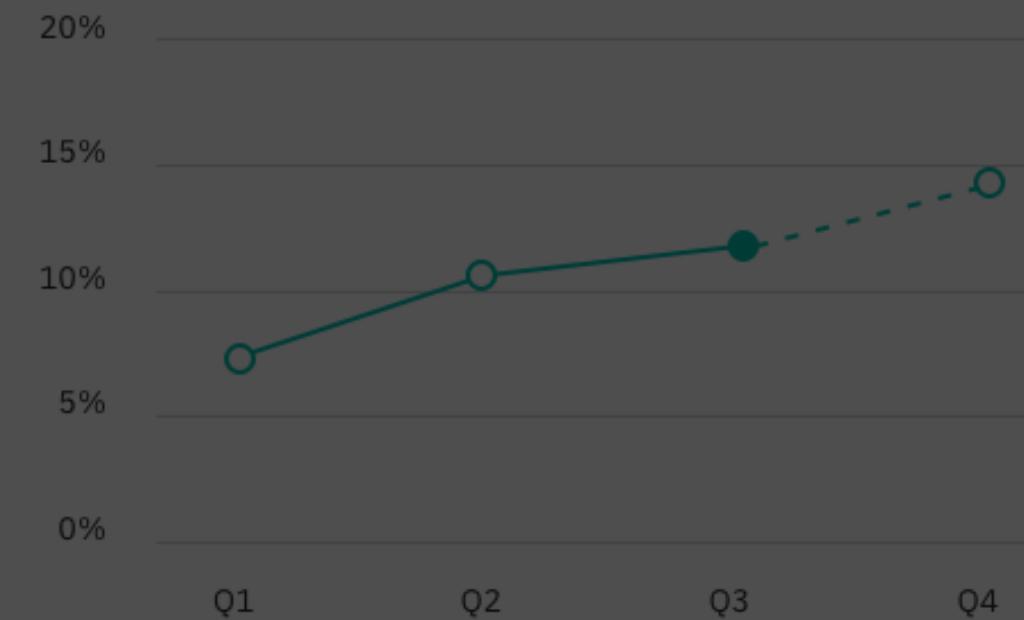
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Q2	12%	
Q3	12%	14%
Q4		14%

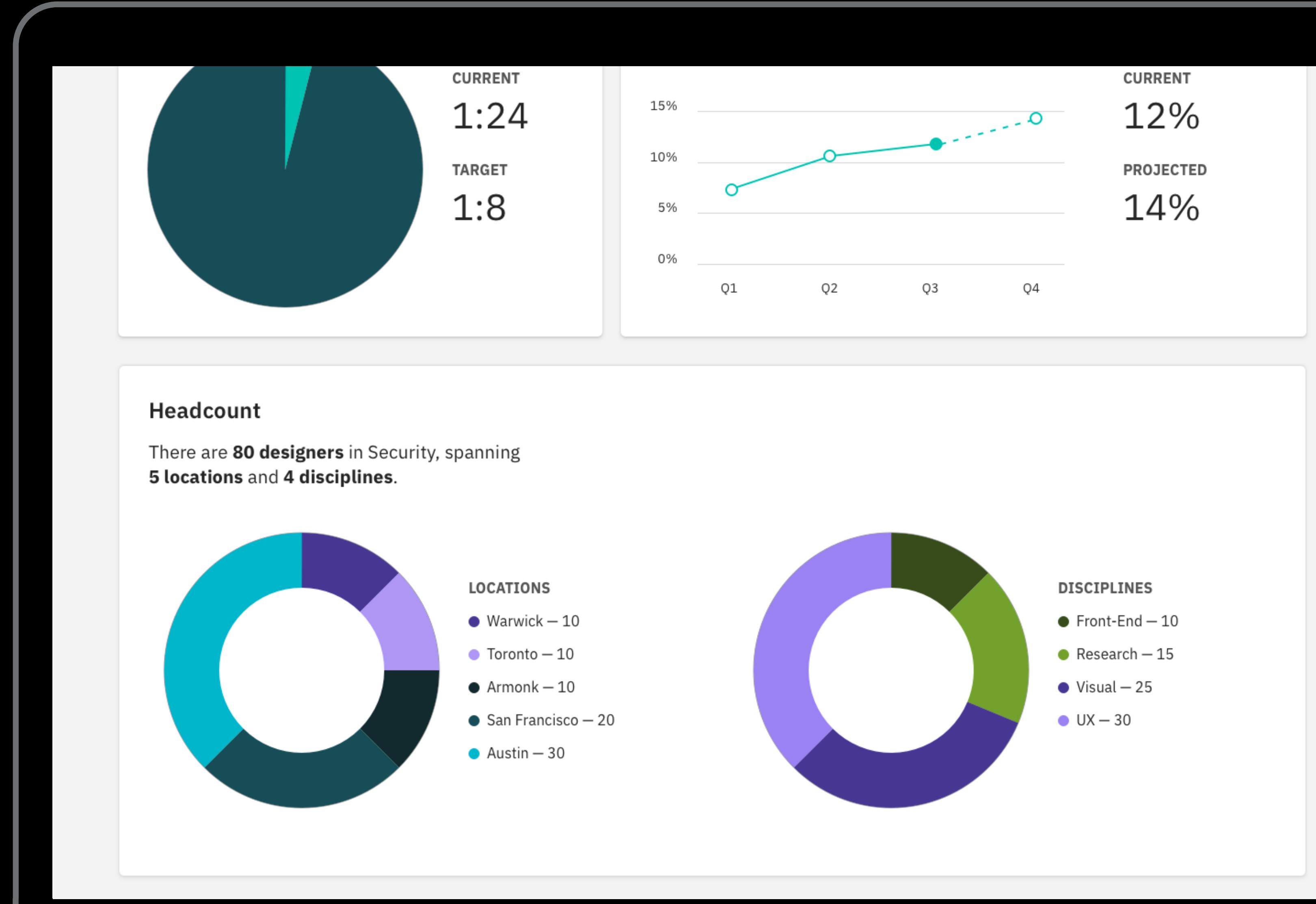
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MacBook Pro

Data Visualizations (subject to change)

- Visually represent abstract concepts like ratios and projections
- Color palette aligns with IBM accessibility guidelines
- White wash brings focus to the visualizations



DESIGN DETAILS

Projects

IBM Design Management System

COGNITIVE SOLUTIONS

Security

Overview Projects

All Projects

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Project 8	ABC	2	0	● 100%	1:9	40

Add Project +

MacBook Pro

Paginated Data Table

- Scale large dataset into a scannable view
- Cells alternate color for visual breaks and contrast
- Affordances to add projects or edit existing ones on hover

All Projects

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Project 8	ABC	2	0	● 100%	1:9	40
Project 9	ABC	2	2	● 50%	1:14	15
Project 10	—	3	3	● 50%	1:10	—

1-10 of 84 items

MacBook Pro

Search & Sort Controls

- Quickly identify specific projects of interest
- Organize projects by priority (e.g. staffing level)

The screenshot shows the IBM Design Management System interface. At the top, it displays "COGNITIVE SOLUTIONS" and "Security". Below this, there are two tabs: "Overview" and "Projects", with "Projects" being the active tab. The main area is titled "All Projects" and contains a search bar labeled "Search". To the right of the search bar is a blue button labeled "Add Project +". A table follows, listing eight projects with columns for Name, Product, # of Designers, Design Gap, Staffing Level, Designers : Developers, and Net Promoter Score. The projects listed are ADX SecureVault, Cloud Security, Guardium Analyzer, Project 4, Project 5, Project 6, Project 7, and Project 8. The staffing levels are indicated by colored dots: green for 100%, yellow for 50%, and red for 30%.

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MacBook Pro

DESIGN DETAILS

Project Detail

IBM Design Management System

Guardium Analyzer Last updated July 20th, 2018 at 3:13:15 X

Net Promoter Score United States Canada United Kingdom

-30

Project Description

Guardium Analyzer is a security application to efficiently identify security and compliance risk associated with GDPR-related data with cloud-based data discovery, data classification, and vulnerability scanning.

Staffing Level • Low

Design Team Lead Charlie Chauhan

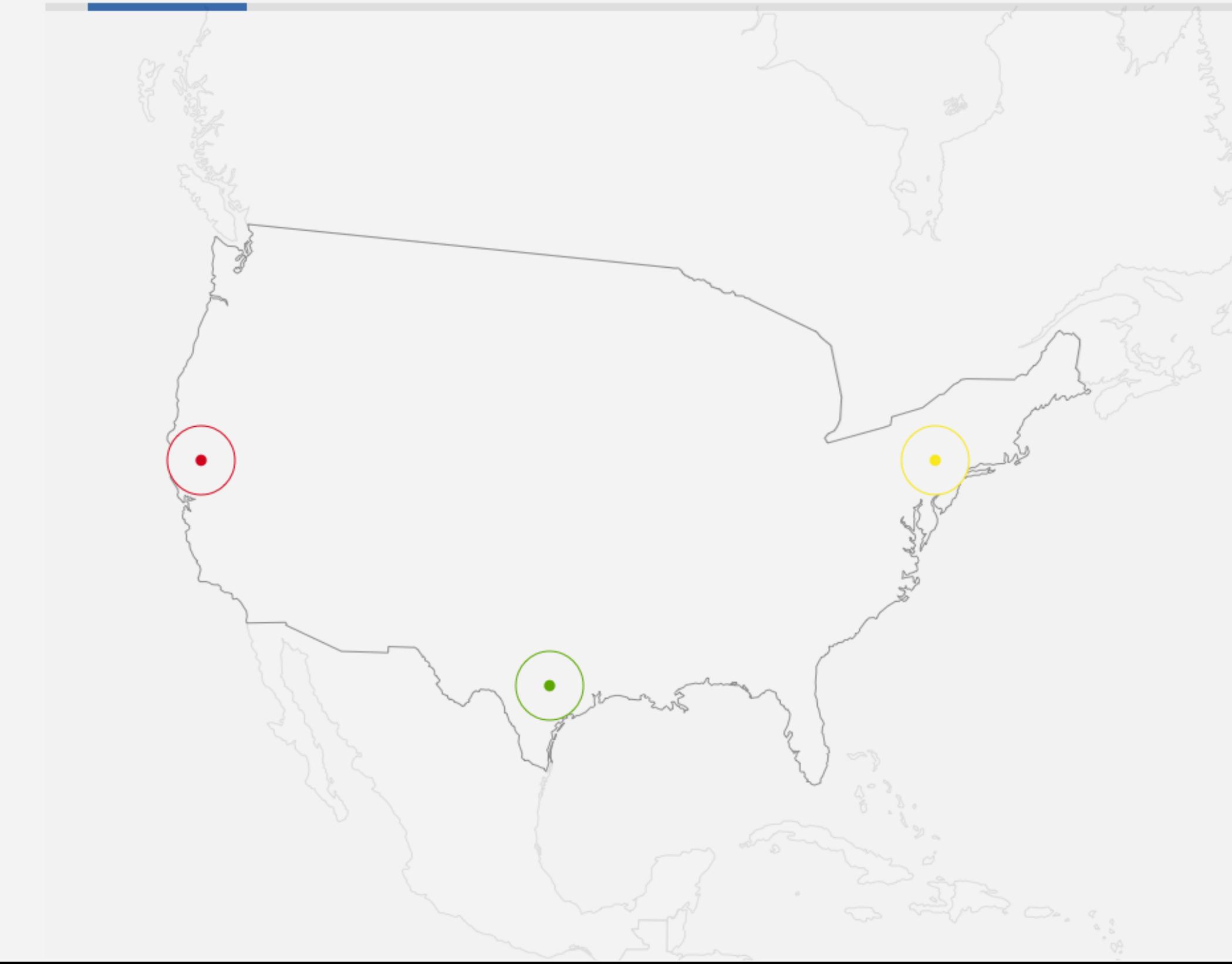
Contact Information charlie.chauhan@us.ibm.com

Locations

Armonk, NY, USA
Austin, TX, USA
San Francisco, CA, USA
Toronto, Canada
Warwick, United Kingdom

Notes

Recently added project as part of the XYZ product line. Poorly received by clients who voiced that the application was hard to use and visually confusing.



MacBook Pro

NPS Callout & Metadata

- NPS identified as an important metric in investment decisions
- Metadata provides context into the project and POCs

IBM Design Management System

Guardium Analyzer Last updated July 20th, 2018 at 3:13:15 X

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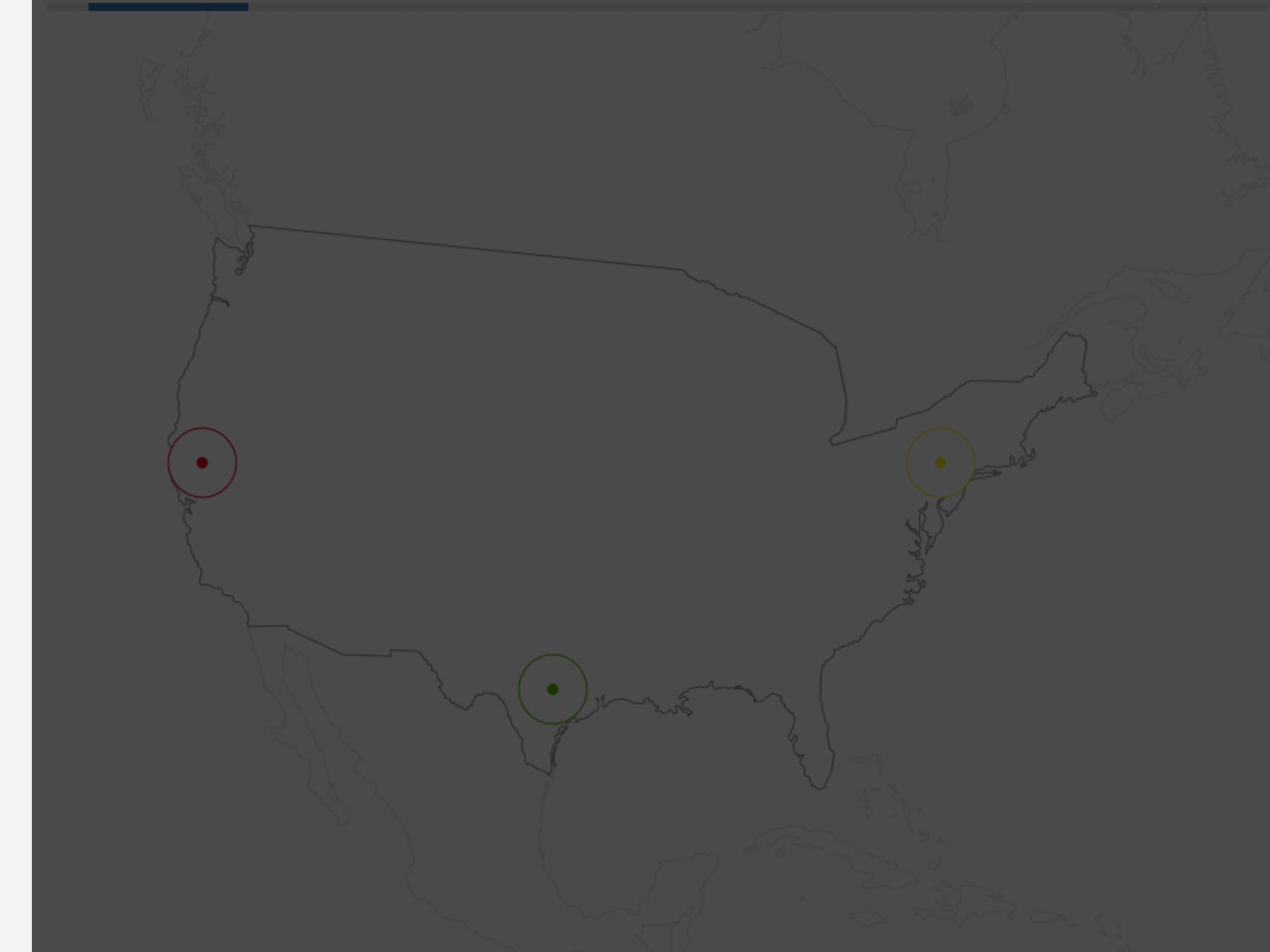
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United States Canada United Kingdom



MacBook Pro

Map UI

- Interact via click + drag to pan and clicking on hotspots
- Hotspots leverage color to denote staffing priority
- Tab bar supports edge cases for projects with international teams

IBM Design Management System

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United States Canada United Kingdom

San Francisco, CA

Current	Gap
1	5
Visual	Gap
1	2
UX	Gap
0	1
Research	Gap
0	2

MacBook Pro

Type Scale

H1 Heading 1
40 px Bold Good design is good business.

H2 Heading 2
24 px Semibold Good design is good business.

Body 1
20 px Regular Good design is good business.

Body 2
16 px Regular Good design is good business.

Navigation / Tab Bar
16 px Semibold Good design is good business.

LABEL
16 px Bold Good design is good business.

Legend
16 px Regular Good design is good business.

Tooltip
12 px Regular Good design is good business.

Color

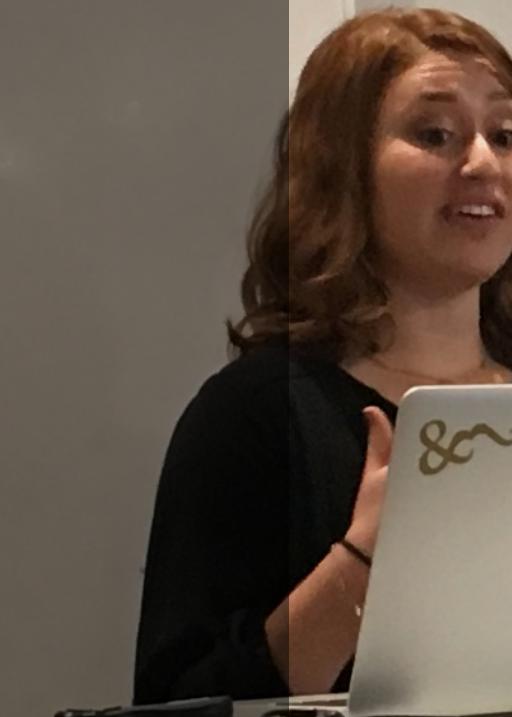
TYPE COLORS		BACKGROUND COLORS		
Brand #3D70B2		(A)	(a) (A)	(a) (A)
Black #000000		(a) (A)	(a) (A)	(a) (A)
Gray 90 #252525		(a) (A)	(a) (A)	(a) (A)
Gray 70 #565656		(a) (A)	(a) (A)	(a) (A)
White #FFFFFF	White	#FFFFFF	Light Wash- Gray 20 #F3F3F3	Table — Blue #F4F7FB

COMPONENT COLORS

Header — Gray 90 #252525	Aqua 1 #00C4B1	Aqua 2 #164D56
Button — Brand #3D70B2	Teal 1 #00B6CB	Teal 2 #122A2E
Tooltip — Gray 70 #565656	Indigo 1 #AE97F4	Indigo 2 #785EF0
Icon — UI-05 #5A6872	Lime 1 #73A22C	Lime 2 #374C1A
Good #417505	OK #F8E71C	
Bad #D0021B		

DATA VIZ PALETTE

- Evaluation & Roadmap



Improve the way IBM design leaders
communicate the value of design to
IBM business leaders

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“Having better access to the data really allows me to focus on building the story around it.”



Haidy Francis

Design Director, IBM Security

“The ability to track staffing needs in all of my locations is **something I would use tomorrow if I had it.**”



Steve Kim

Design Director, IBM Blockchain

PRODUCT ROADMAP

CUPCAKE

Short-term
[3-6 months]

BIRTHDAY CAKE

Medium-term
[1-2 years]

WEDDING CAKE

Long-term
[3-5 years]

PRODUCT ROADMAP

CUPCAKE

User Onboarding
Manual Input

BIRTHDAY CAKE

Medium-term

WEDDING CAKE

Long-term

PRODUCT ROADMAP

CUPCAKE

Short-term

BIRTHDAY CAKE

Version History
Comparison Features
Partially-Automated

WEDDING CAKE

Long-term

PRODUCT ROADMAP

CUPCAKE

Short-term

BIRTHDAY CAKE

Medium-term

WEDDING CAKE

DMS API
Fully-Automated
Watson Integrations

- Reflections

WHAT DID I LEARN?

Embrace ambiguity.

Real-life problems are complex, messy, and unbounded. Deconstructing these problems requires welcoming the unknown, ruthless prioritization, and a boundless desire to learn and grow your understanding.

WHAT DID I LEARN?

Take ownership over the entire process.

The mark of a good designer is not (just) in the pixels.

The ability to influence and execute across the entire process— from research and strategy to development and roadmap— is equally important as craft itself.

WHAT DID I LEARN?

$$1 + 1 = \infty.$$

Stephen Covey tells us that synergy as a whole leads to greater outcomes than the sum of its parts. In working with a diverse team, we leveraged our different skill sets to maintain velocity and bring out each others' potential.

THANK YOU :)