



Leveraging the Power of Prototyping in UX

→ **Matthias Ott**
@m_ott
matthiasott.com

Matthias Ott

User Experience Designer,
UI Engineer, Speaker

@m_ott

<https://matthiasott.com>



UX Design

Research, Information Architecture,
Agile Product Development, User Testing

Prototyping

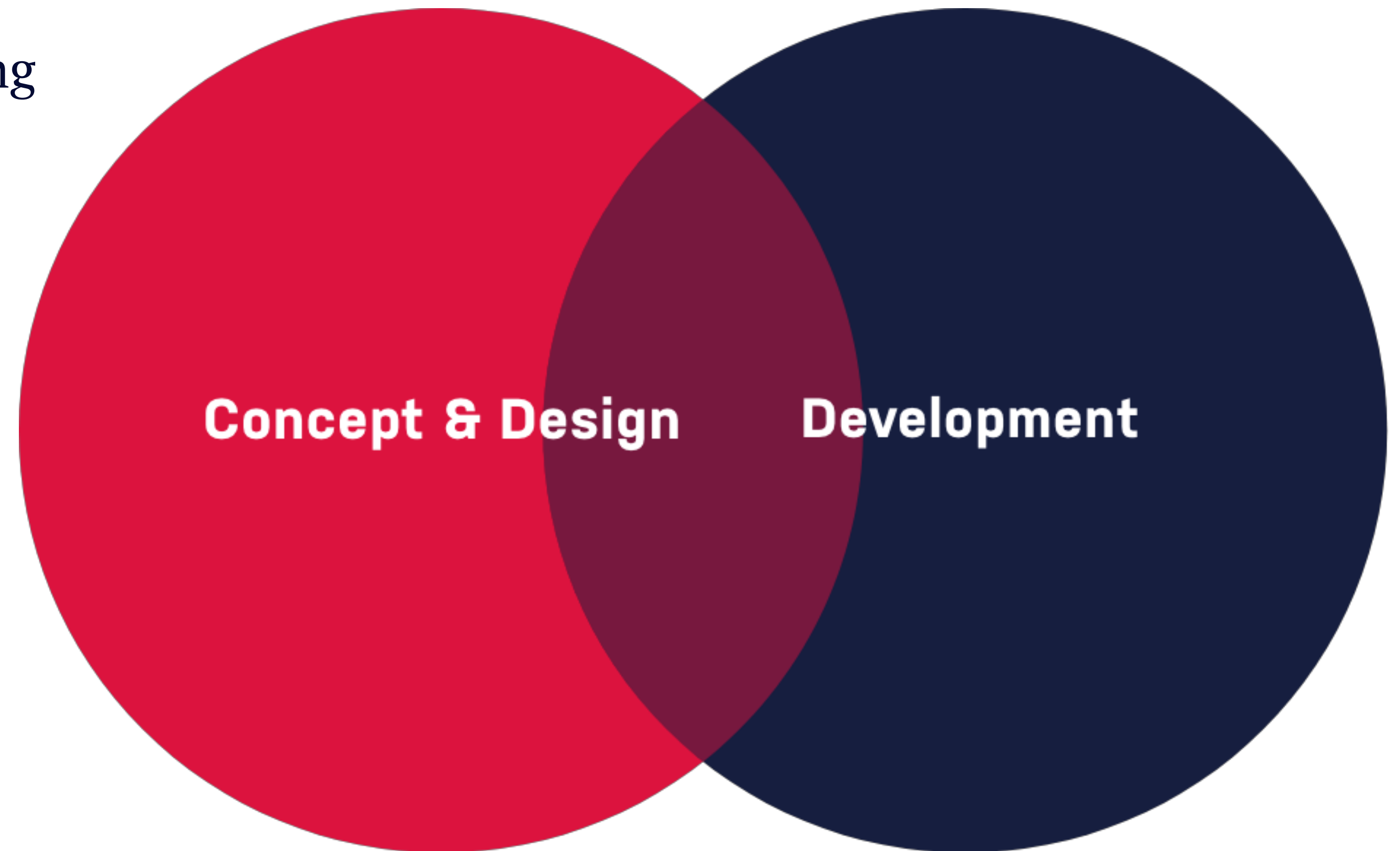
Low- to high-fidelity, with code,
iterative, collaboratively

UI Design

Modular UI Design, Design Systems

UI Engineering / Frontend Design

Semantic HTML, modern CSS,
and resilient JavaScript for
performant, accessible user interfaces



Clients include



Workshops & Trainings

UX and UI design,
prototyping,
responsive web design,
and Adobe XD



Lectureship for Interface Prototyping

Muthesius University
of Fine Arts and Design, Kiel, Germany



<https://matthiasott.com>



Into the Personal-Website-Verse

📅 12 May 2019
#blogging #indieweb #letsfixit #personal #web #websites

More and more people are rediscovering their personal websites as an alternative to so-
cial media that provides more control and freedom of expression. It's time to connect
our sites even further and create a decentralized fabric of interconnected personal sites
that enables each individual to engage in an open discussion – answering, challenging,
and acknowledging the ideas of others through a universe of personal sites.

[Continue reading →](#)



Saving Your Web Workflows with Prototyping

ABOUT THIS SITE

This is the website of **Matthias Ott**,
independent user experience de-
signer and user interface engineer
from Stuttgart, Germany.

CONNECT WITH ME

- ✉ mail@matthiasott.com
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- 📡 [Subscribe](#)



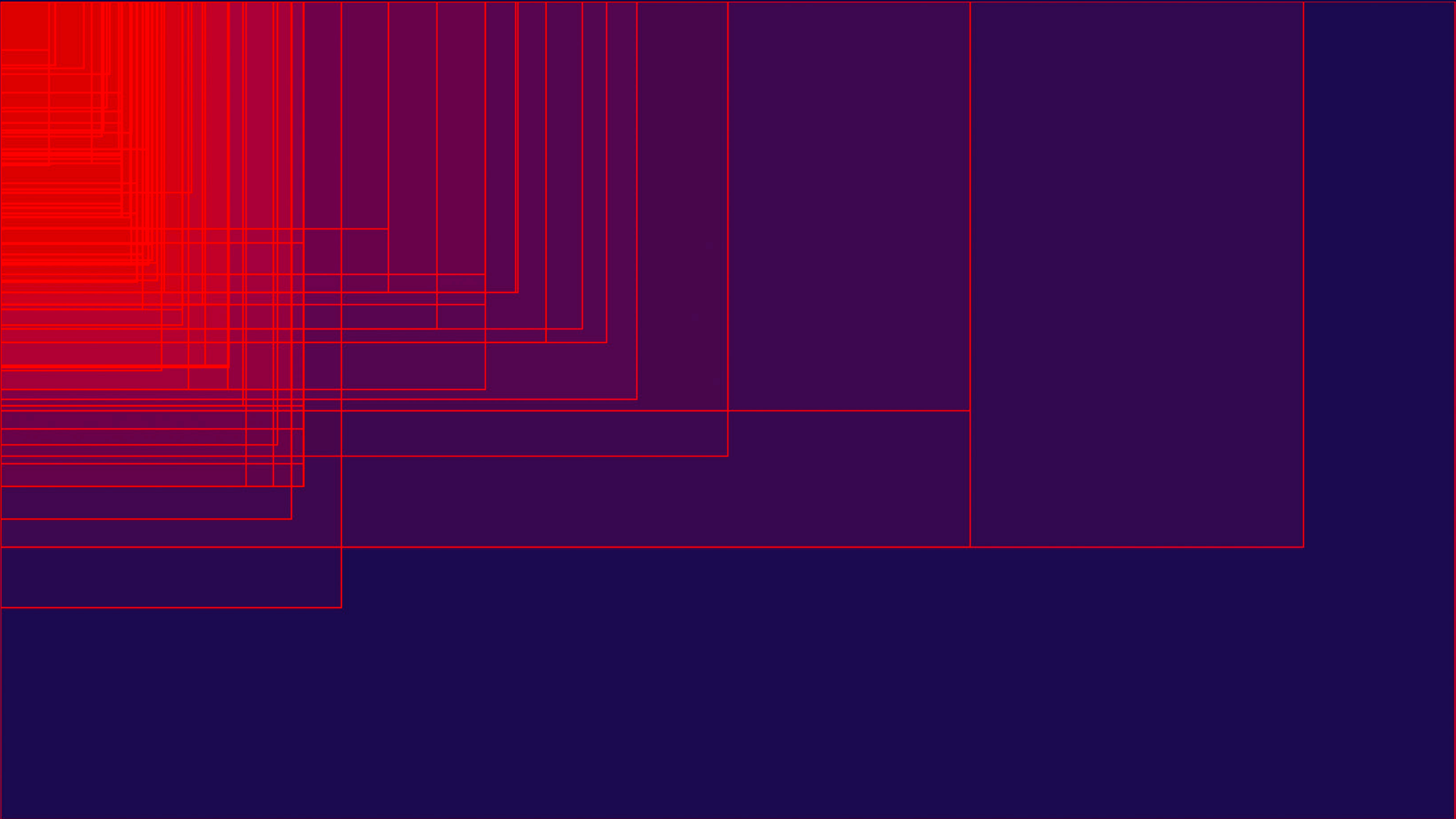
<https://>

PROTOTYPING.NEWS

Prototyping

A historical photograph of the Wright Flyer biplane on a grassy field, with a man standing nearby. The image is overlaid with a semi-transparent red rectangle and the word 'Prototyping' in large white text.







Web Components

Vanilla JS

Lyne

Curio

Webster

Photoblog

Sketch

Gimp

Lightroom

Flash

Docker

Electron

Facebook

Twitter

Internet Explorer

Brave

Samsung Internet

Android

iOS

MS Paint

Illustrator

Drawboard

Procreate

Adobe AIR

Chrome

Netpage

Black

Opera Mini

Safari

iOS version

Focus

Windows 10

Millennium

Google Drive

Dropbox

Google

Java

Eclipse

PHP Storm

NetBeans

Atom

Flux

Redux

React

HTML

Backbone

Meteor

iCloud

Next Cloud

WordPress

Drupal

Piwik

Site Core

Contao

WooCommerce

Fastly

Filezilla

Code Runner

jQuery

jQuery

jQuery

jQuery

jQuery

jQuery

jQuery

jQuery

jQuery

jQuery

jQuery

Carroll

Stack Overflow

JS Bin

Code Bin

Icon fonts

Variable fonts

Font Bundles

Color fonts

Font Bundles

Font Bundles

Font Bundles

Font Bundles

Font Bundles

Font Bundles

Font Bundles

Font Bundles

MVC

ARIA

JSON

RSS

Markdown

YAML

Regexp

Monit

Prigda

Prigda

Prigda

Prigda

BEM

Smacss

DOCSS

Twitter

Google Fonts

Font Bundles

Font Bundles

Font Bundles

Font Bundles

Font Bundles

Font Bundles

Font Bundles

Font Bundles

Fallen

Slides

Leads

Sass

Bower

Elastic Search

Google Tag Manager

Page Speed Insights

BB Edit

BB Edit

BB Edit

BB Edit

BB Edit

Symfony

Django

Understand

Post CSS

Prepack

Microsoft TLS

Google AdWords

Lightbox

Page Speed Insights

Page Speed Insights

Page Speed Insights

Page Speed Insights

Page Speed Insights

Zend

Laravel

Gulp

Webpack

Grit

Graph QL

Facebook ads

HTML email

Notepad

Notepad

Notepad

Notepad

Notepad

Cloudinary

Key CDN

Grunt

rpm

Subversion

Map Box

Browser dev tools

SVG OMg

Vim

Emacs

Emacs

Emacs

Emacs

Style Guides

Greenish

d3

VelocityJS

VelocityJS

VelocityJS

VelocityJS

VelocityJS

VelocityJS

VelocityJS

VelocityJS

VelocityJS

VelocityJS

Microservices

SVGO

Open Graph

Couch DB

Index DB

Local Storage

Session Storage

MDN

JSON

XML

GML

PDF

PDF

RDFa

Schemas.org

SEO

SEO

SEO

SEO

SEO

SEO

SEO

SEO

SEO

SEO

SEO

Fastly

Filezilla

Code Runner

jQuery

jQuery

jQuery

jQuery

jQuery

jQuery

jQuery

jQuery

jQuery

jQuery

WordPress

WordPress

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NOT AN
EXIT

CAUTION
EYE PROTECTION
REQUIRED
IN THIS AREA

HR-02

EMERGENCY
SHUT OFF

Source A: gender, age, hair length, glasses, pose



Source B:
everything
else

Result of combining A and B

Screen size
Pixel density
Color spaces
Sensors
Input types
Connection speeds
Browsers
Screenreaders
APIs
Augmented Reality
Virtual Reality
Machine Learning / AI
Voice UI
Robotics

...

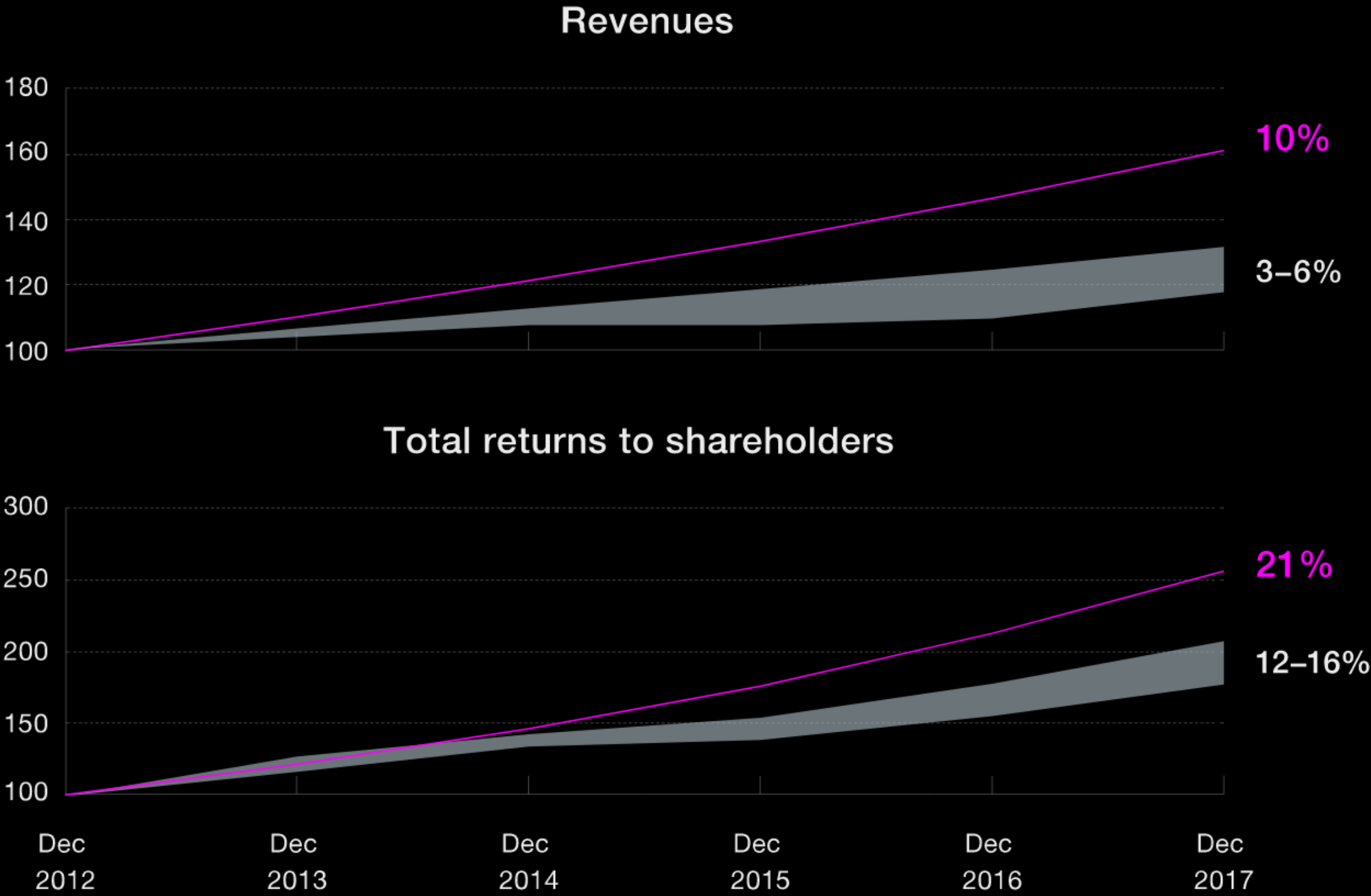


YTCount	12:29
101	
PewDiePie	66.457.773
SJAAK	73.972
Vlogchies	2

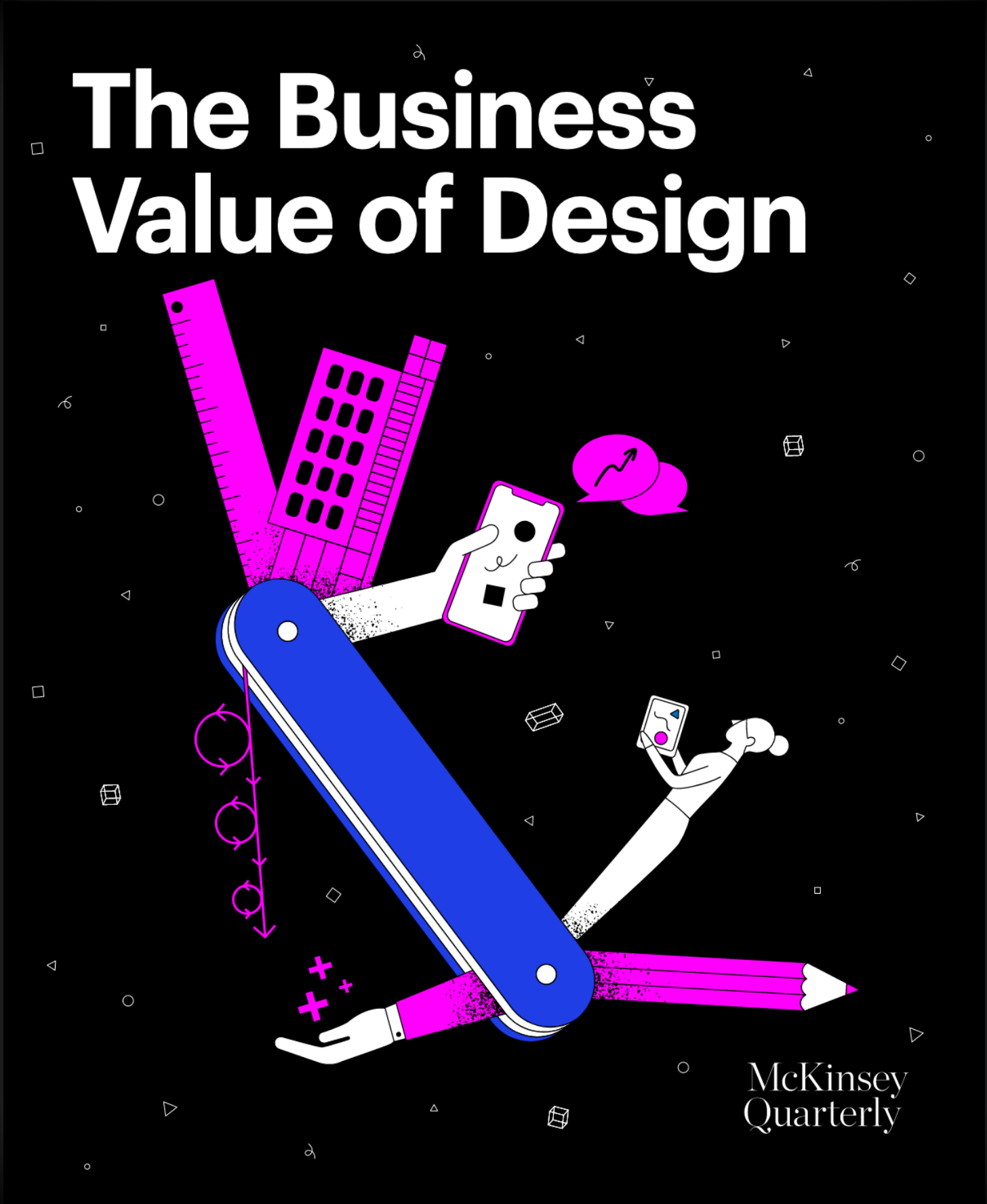
Companies with top-quartile McKinsey Design Index scores outperformed industry-benchmark growth by as much as two to one.

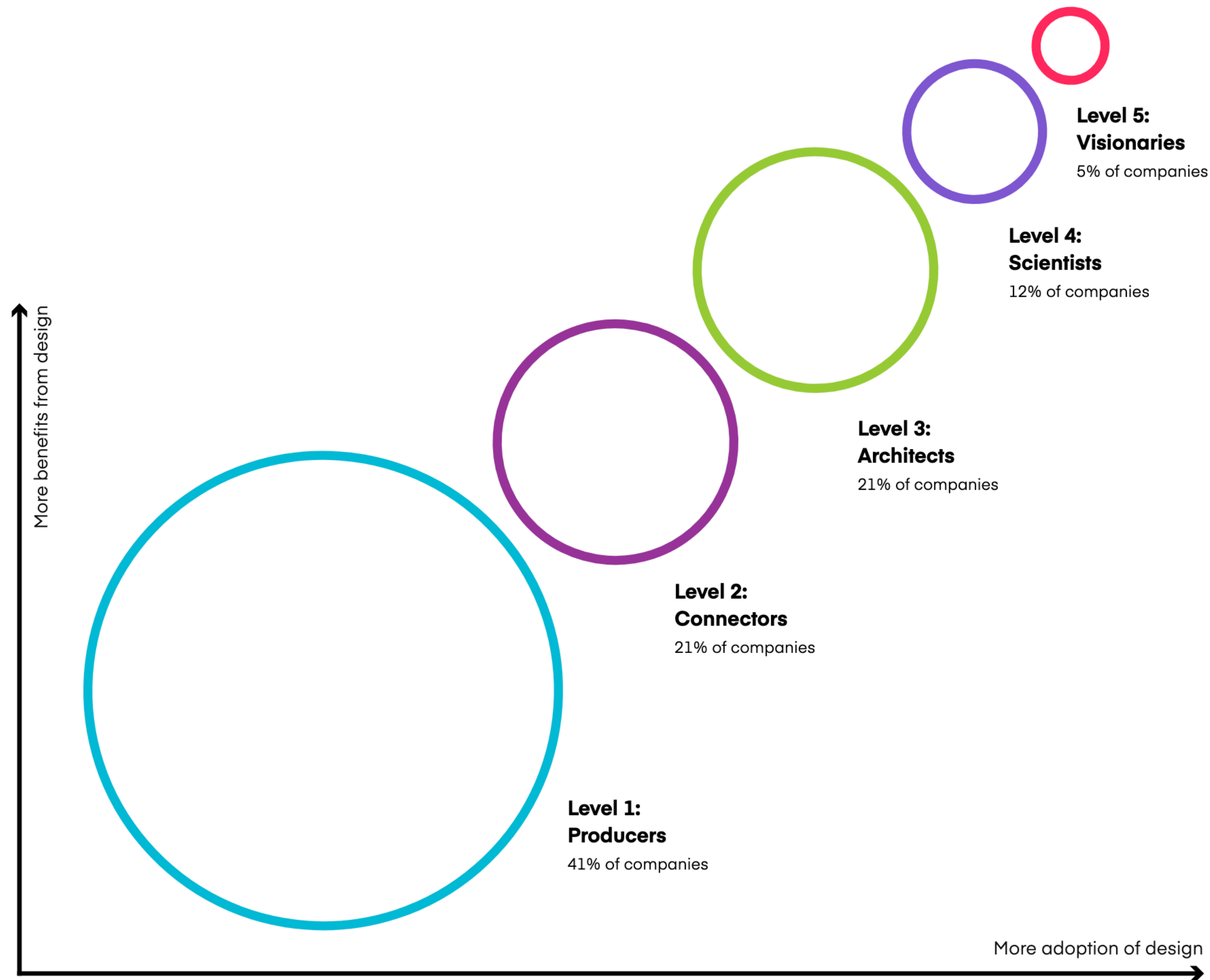
Annual growth (normalized), %

- Top-quartile McKinsey Design Index performers
- Industry benchmarks¹



¹The envelope was set by the minimums and maximums of three independent data sets: MDI 2nd, 3rd, and 4th quartiles; the S&P 500; and a McKinsey corporate database of 40,000 companies.

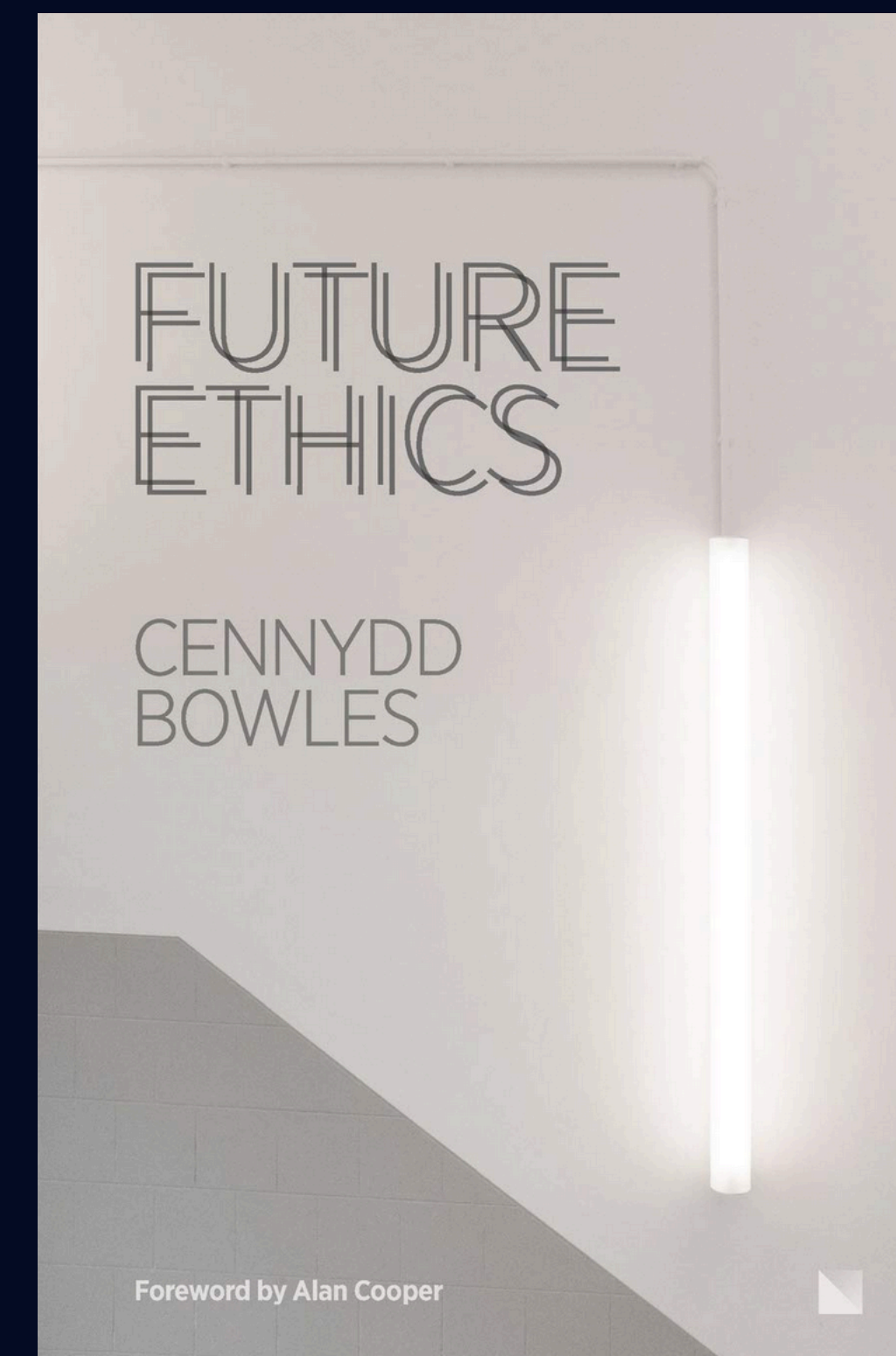
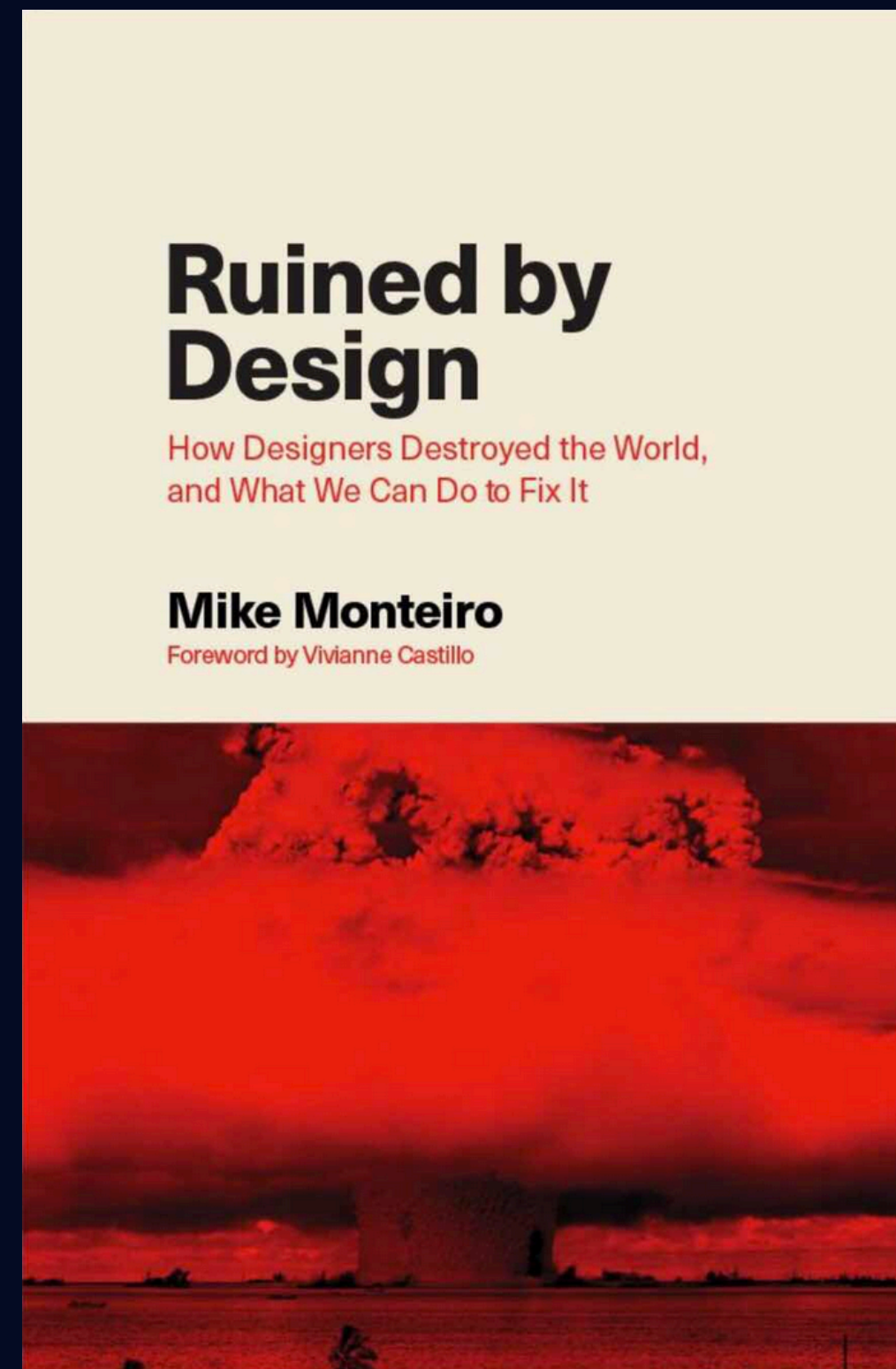




*Based on 2,229 respondents



With great power...



How can companies and designers keep track of emerging *technologies* and come up with innovative *solutions* that solve *real problems* and create business value while respecting *ethical norms*?

This problem is not new...

*Charles and
Ray Eames*



Ray and Charles Eames selecting slides for the exhibition, "Photography & the City", 1968. © 2011 Eames Office, LLC.







© Eames Office



© Eames Office



© Eames Office

Design is the application of
technology and *human intention*
to a problem.

Khoi Vinh

Design means to...

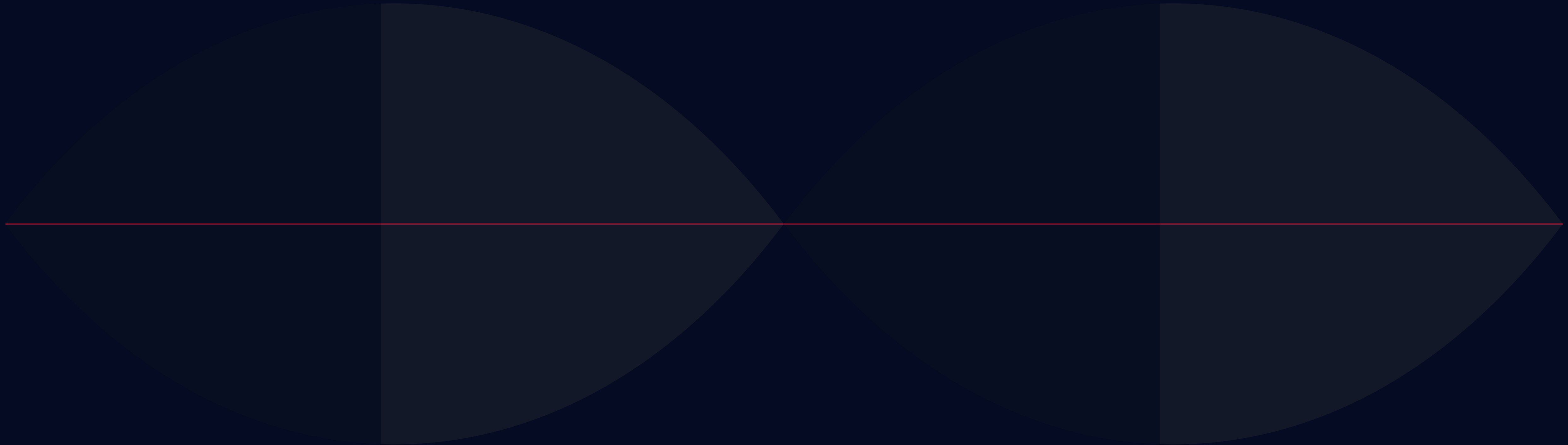
1. Define the problem.
2. Imagine the possibilities.
3. Test a hypothesis.
4. Repeat.

Discover
insight into the problem

Define
what to focus on

Develop
potential solutions

Deliver
solutions that work



▲
TEST

The "Double Diamond"

This process also fits the way humans think, btw...









Karl Fast
INormative



August 28th, 2015

Karl Fast // Understanding Embodiment // UX 2015

4 years ago



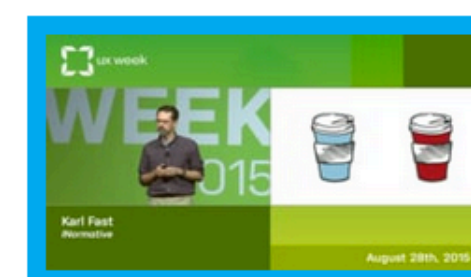
Adaptive Path

PRO

+ Follow

More from Adaptive Path

☒ Autoplay next video



Karl Fast // Under...
Adaptive Path

The creative process is a
dialogue.

Prototyping is a way to *think with the materials*
we use to solve our problems.

Prototyping is a way to *think with the materials*
we use to solve our problems.

Prototyping lets you *explore materials*.

Prototyping is a way to *think with the materials* we use to solve our problems.

Prototyping lets you *explore materials*.

Prototyping lets you *create variants — cheap*.

Prototyping is a way to *think with the materials* we use to solve our problems.

Prototyping lets you *explore materials*.

Prototyping lets you *create variants — cheap*.

Prototyping lets you *validate ideas and assumptions*.

Prototyping is a way to *think with the materials* we use to solve our problems.

Prototyping lets you *explore materials*.

Prototyping lets you *create variants — cheap*.

Prototyping lets you *validate ideas and assumptions*.

Prototypes create a *common understanding*.

Prototyping is a way to *think with the materials* we use to solve our problems.

Prototyping lets you *explore materials*.

Prototyping lets you *create variants — cheap*.

Prototyping lets you *validate ideas and assumptions*.

Prototypes create a *common understanding*.

Prototyping helps you *gain design maturity*.



Prototyping

Best Practices

6 Principles of Prototyping

1. Define Your Non-Negotiables
2. Let the Product Drive Your Style
3. Solve the Hardest Problems First
4. Build Ugly Prototypes
5. Converge Quickly or Reset
6. Iterate Like Crazy



Caitlin Kalinowski

Head of VR Hardware at Oculus



Six Steps to Superior Product Prototyping: Lessons from an Apple and Oculus Engineer

<https://firstround.com/review/six-steps-to-superior-product-prototyping-lessons-from-an-apple-and-oculus-engineer/>

6 Principles of Prototyping

- 1. Define Your Non-Negotiables**
2. Let the Product Drive Your Style
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4. Build Ugly Prototypes
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6. Iterate Like Crazy

1. Define Your Non-Negotiables

What are the absolute must-haves?

What are the primary objectives?

Write them down.

6 Principles of Prototyping

- 1. Define Your Non-Negotiables**
- 2. Let the Product Drive Your Style**
3. Solve the Hardest Problems First
4. Build Ugly Prototypes
5. Converge Quickly or Reset
6. Iterate Like Crazy

Caution

Speed



Constantly check and recheck all assumption

Critical for

- Medical products
- Anything that poses a health or safety issue
- High-volume products

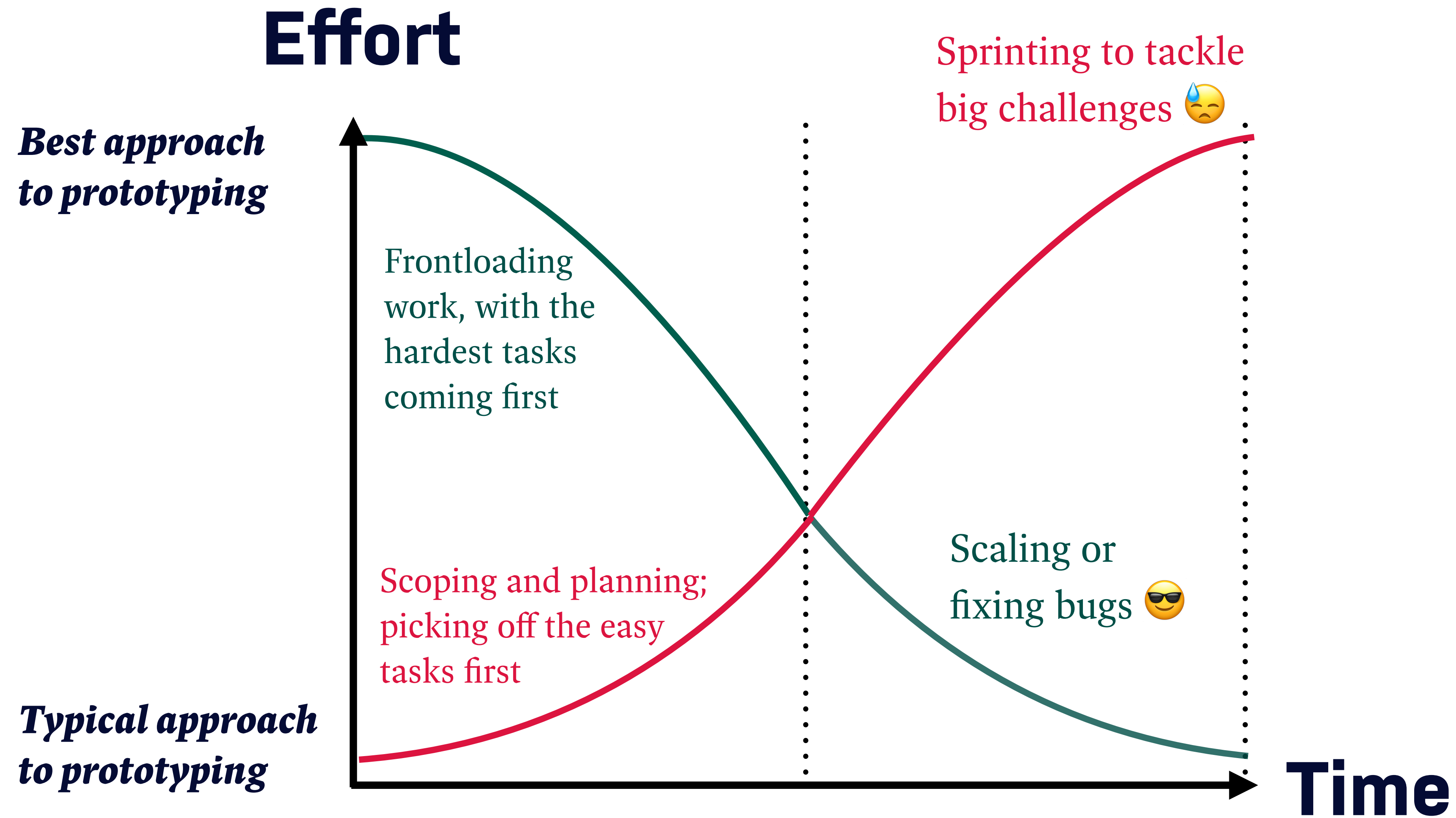
Choose your top (five) priorities. Only focus on them.

Critical for

- Beating a competitor to market
- Low-volume products

6 Principles of Prototyping

- 1. Define Your Non-Negotiables**
- 2. Let the Product Drive Your Style**
- 3. Solve the Hardest Problems First**
4. Build Ugly Prototypes
5. Converge Quickly or Reset
6. Iterate Like Crazy





Jason Fried ✓

@jasonfried

Following



When prototyping, always try wackier/quirkier stuff first. The deeper you get into a project, the more conservative it tends to get. Stranger ideas are more at home earlier in the process.

2:55 PM - 1 Aug 2018

542 Retweets 1,822 Likes



19



542



1.8K



6 Principles of Prototyping

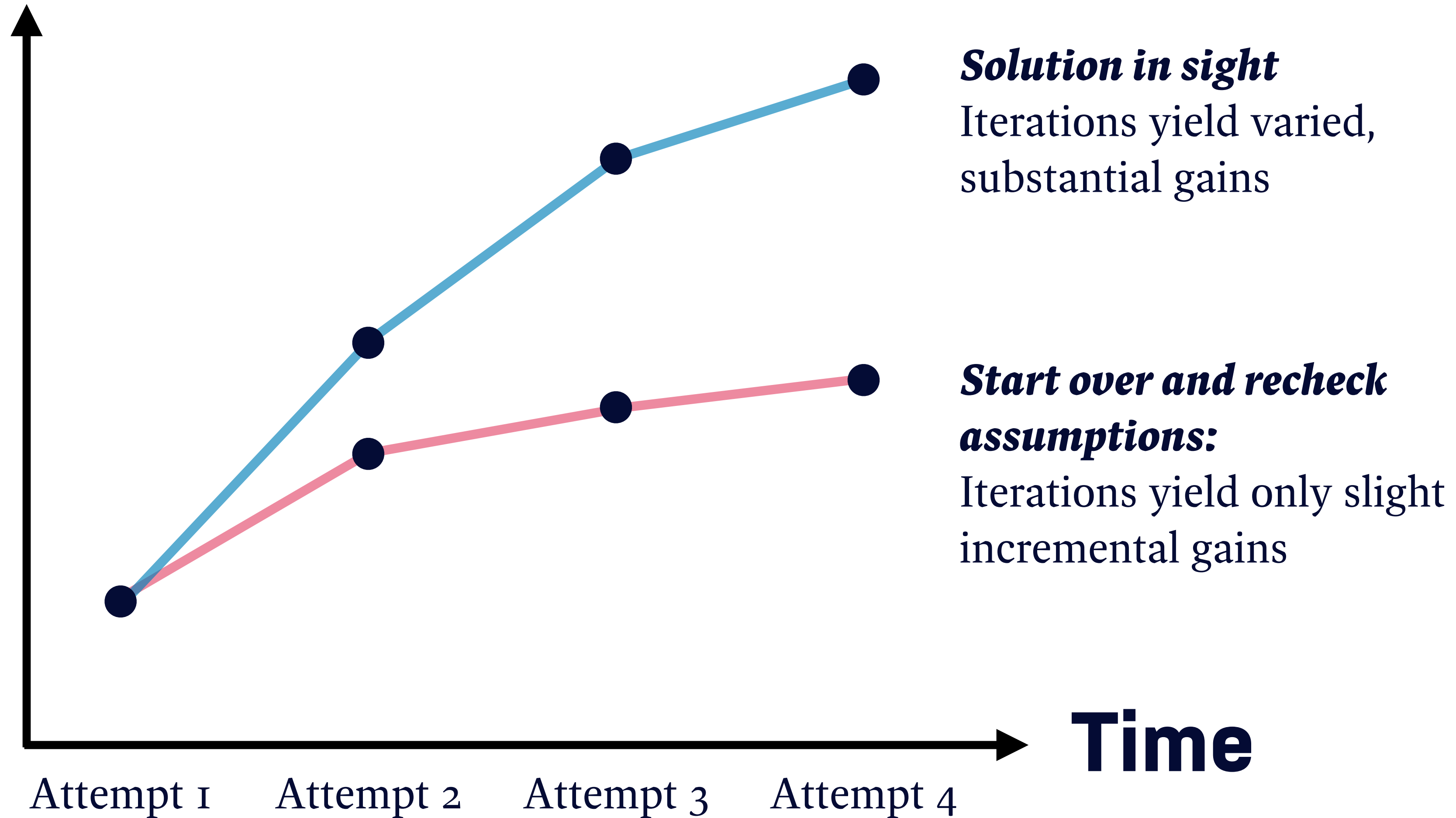
- 1. Define Your Non-Negotiables**
- 2. Let the Product Drive Your Style**
- 3. Solve the Hardest Problems First**
- 4. Build Ugly Prototypes**
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6 Principles of Prototyping

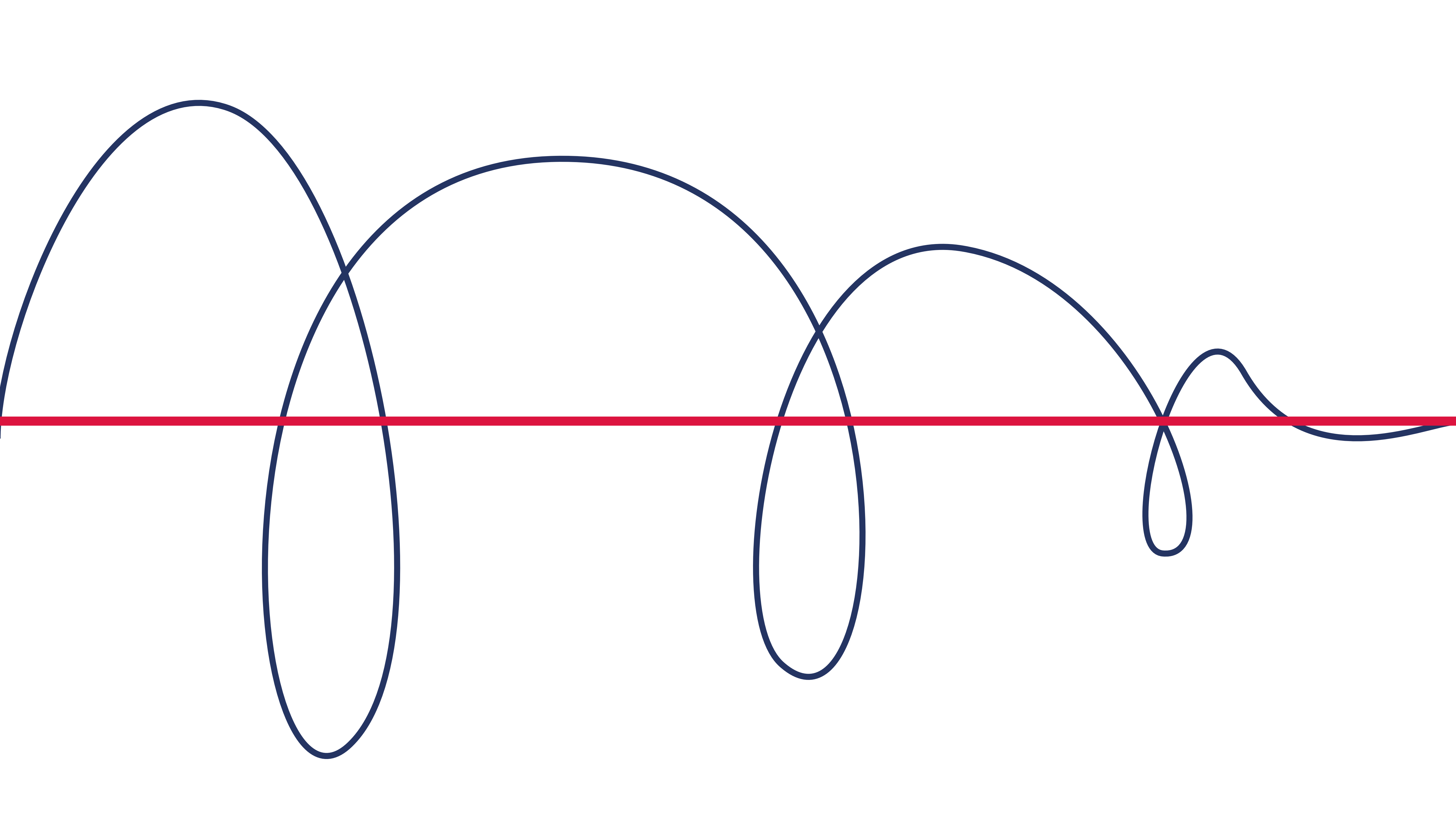
- 1. Define Your Non-Negotiables**
- 2. Let the Product Drive Your Style**
- 3. Solve the Hardest Problems First**
- 4. Build Ugly Prototypes**
- 5. Converge Quickly or Reset**
- 6. Iterate Like Crazy**

Goal



6 Principles of Prototyping

- 1. Define Your Non-Negotiables**
- 2. Let the Product Drive Your Style**
- 3. Solve the Hardest Problems First**
- 4. Build Ugly Prototypes**
- 5. Converge Quickly or Reset**
- 6. Iterate Like Crazy**





Prototyping

Examples

Anything can be a prototype.

Sketches

Paper prototypes

Sticky notes

Personas

User Flows

Experience Maps

Wireframes

Animations

Clickdummies

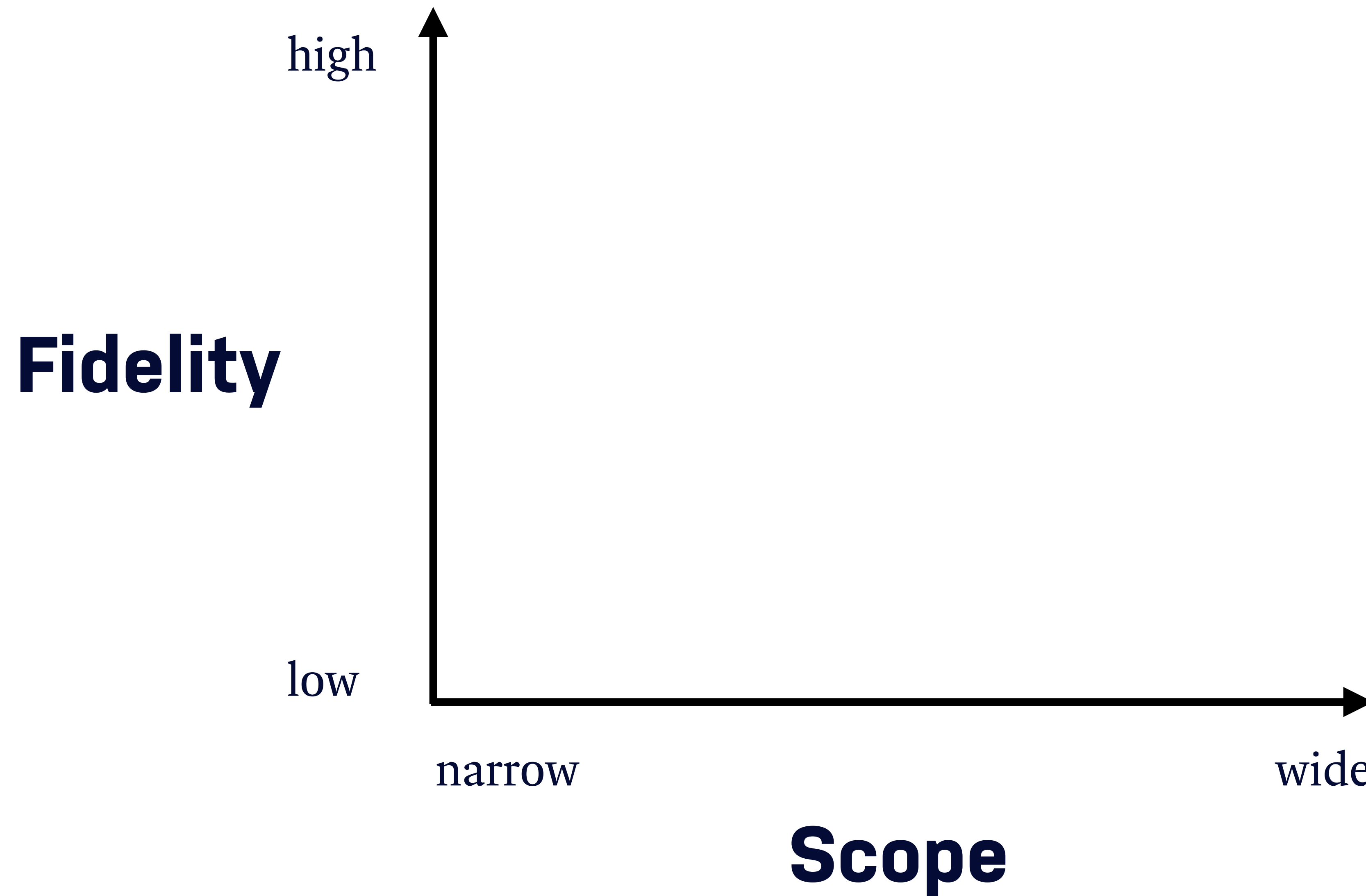
Storyboards

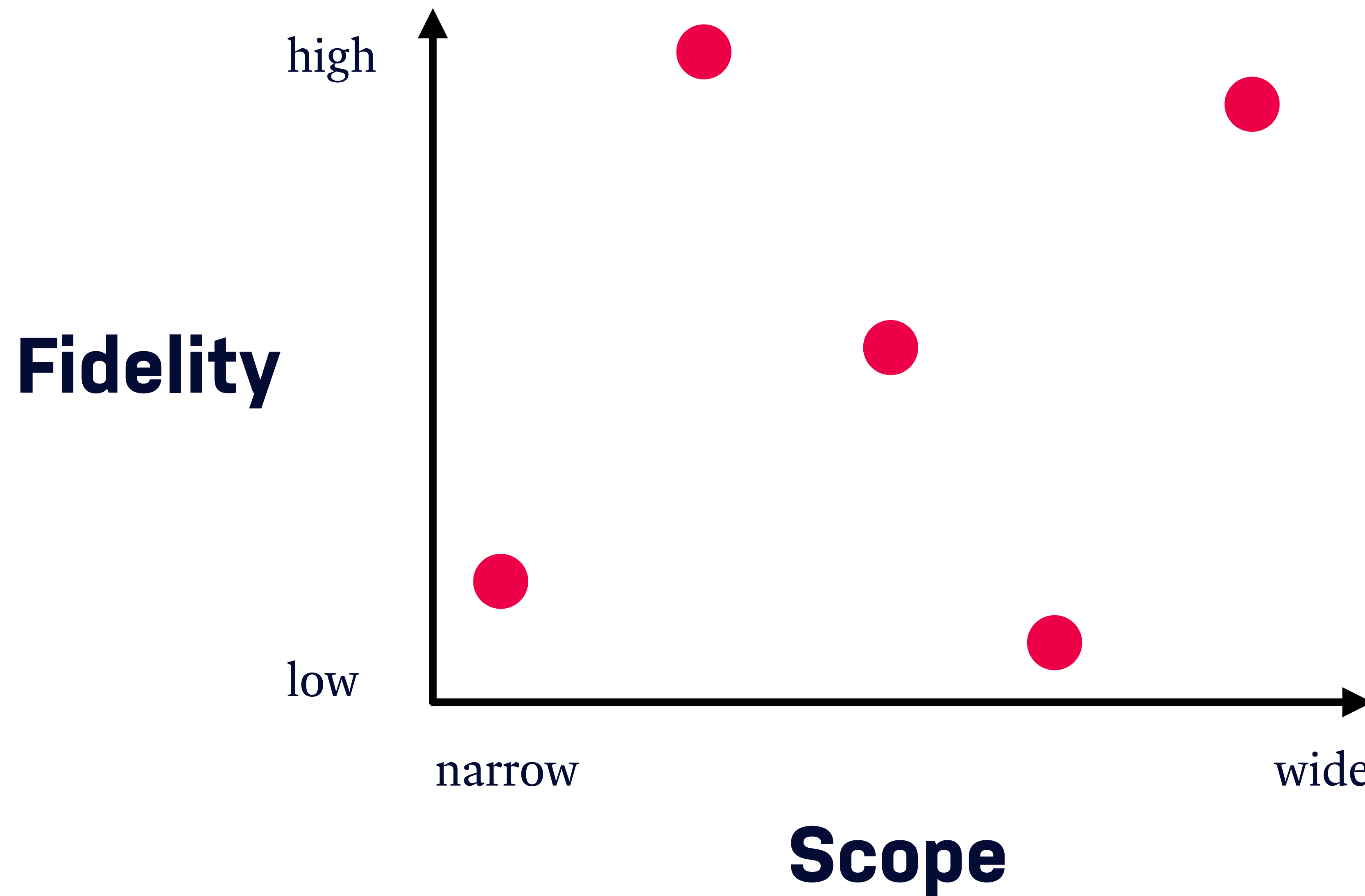
Website

...

**Collect ideas,
categorize,
prioritize**







Prototyping user flows

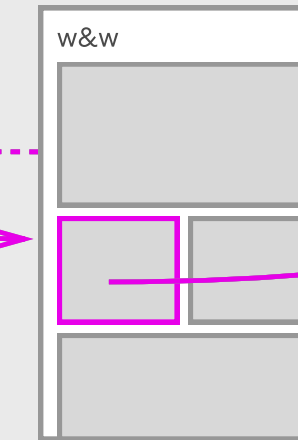
Ziel 1: Eine aktuelle Unternehmensmeldung aufrufen und Bilder dazu herunterladen

1) Suche



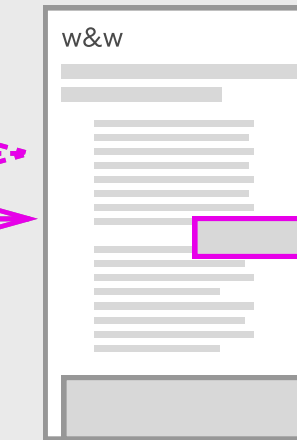
Philip gibt in einer Suchmaschine „W&W presse“ ein. In der Ergebnisliste wählt er den ersten Link.

2) Newsroom / Presse



Im Newsroom wählt er eine der aktuellsten Nachrichten aus.

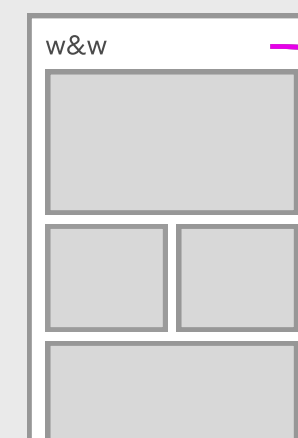
3) News-Detailseite



Auf der Detailsseite der Nachricht erhält er nicht nur den Text an sich, sondern anbei auch ein Diagramm und Bilder. Er klickt auf den Download-Link für ein ZIP mit allen Bildern zur Meldung.

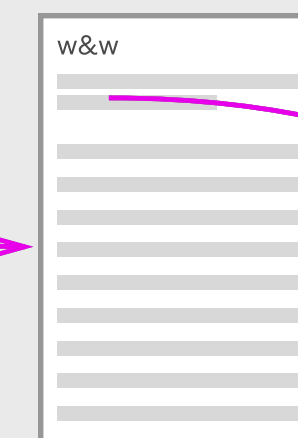
Ziel 2: Eine aktuelle Studie herunterladen

1) Newsroom



Philip kennt den Newsroom der W&W und ruft ihn direkt auf. Er klickt in der Subnavigation auf „Publikationen“.

2) Publikationen



Er landet auf der Seite mit einer Auflistung aller Publikationen in chronologischer Reihenfolge. Die Liste der Publikationen filtert er nach „Studien“.

3) Filter: Studien

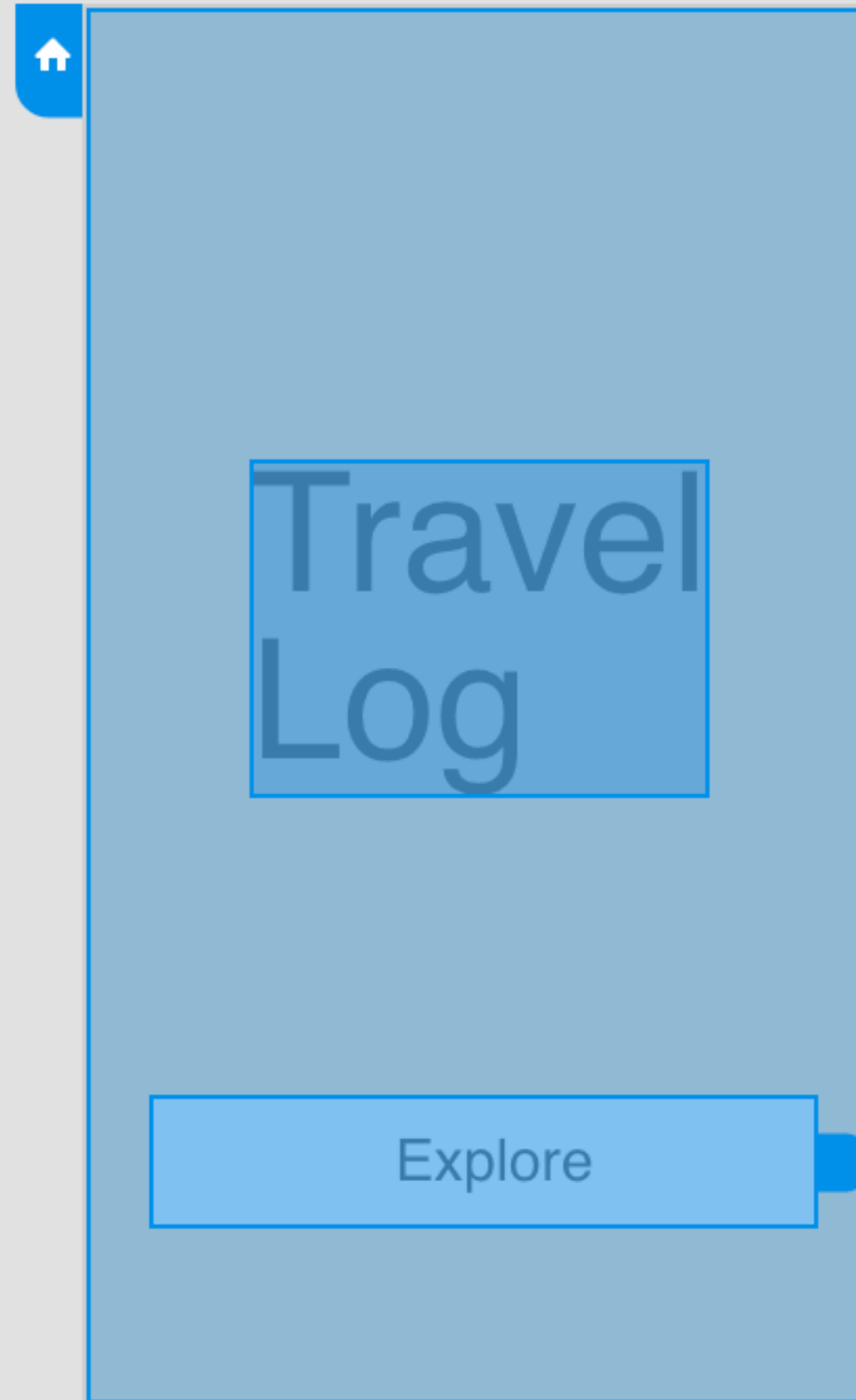


Er wählt eine Studie aus der Liste und lädt sie herunter.

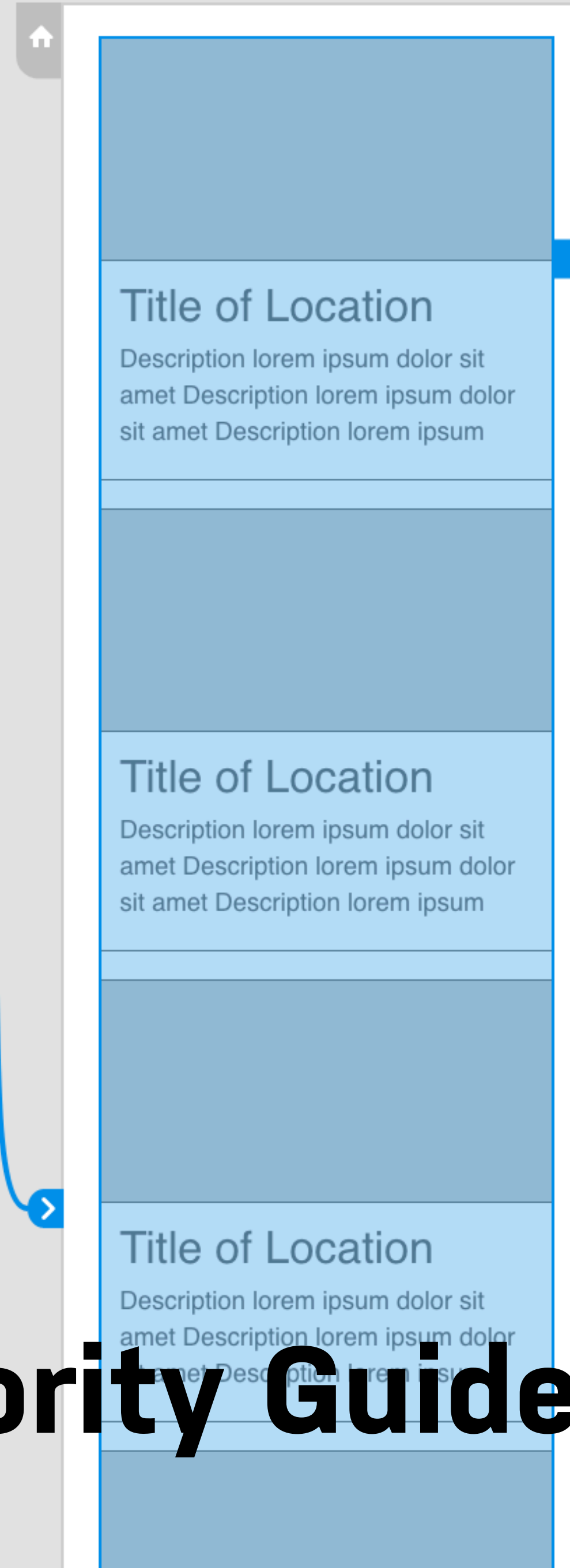


Sketches / Paper prototypes

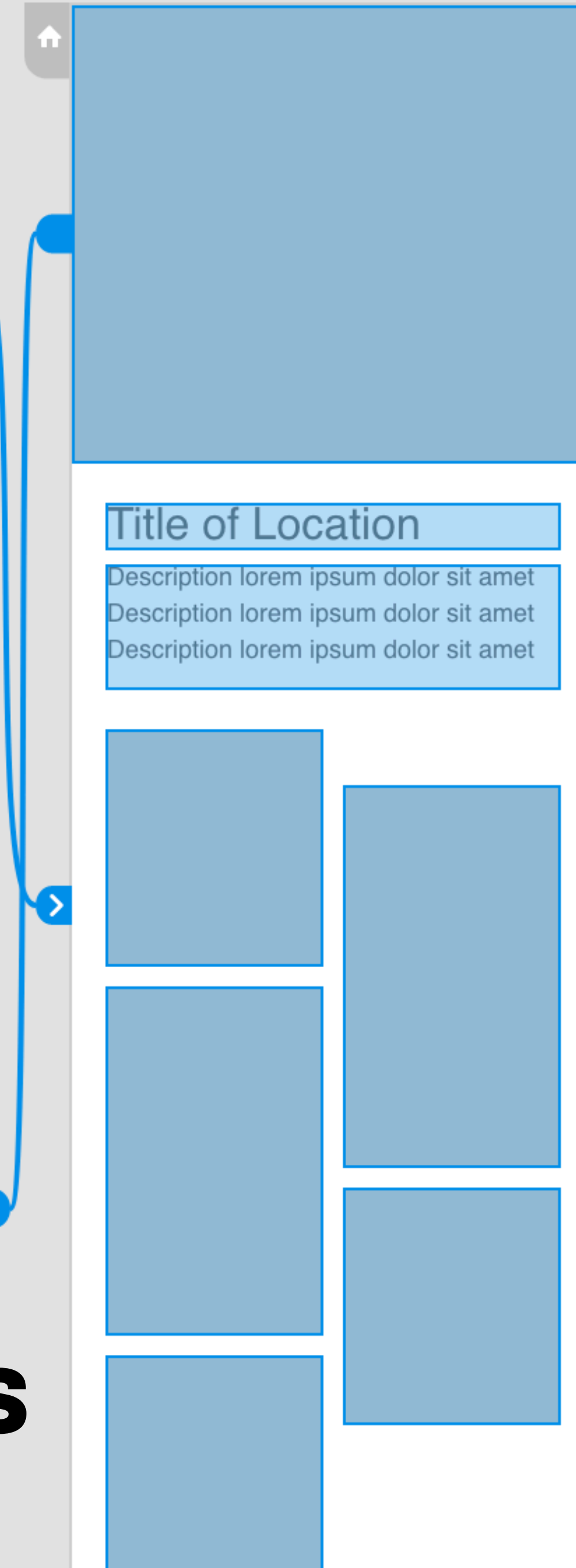
Splash



List



Detail



Wireframes / Priority Guides

Teaser

Category

This is the
headline for this
teaser element



TRAVEL

**Explore the
raw beauty of
the Alps**

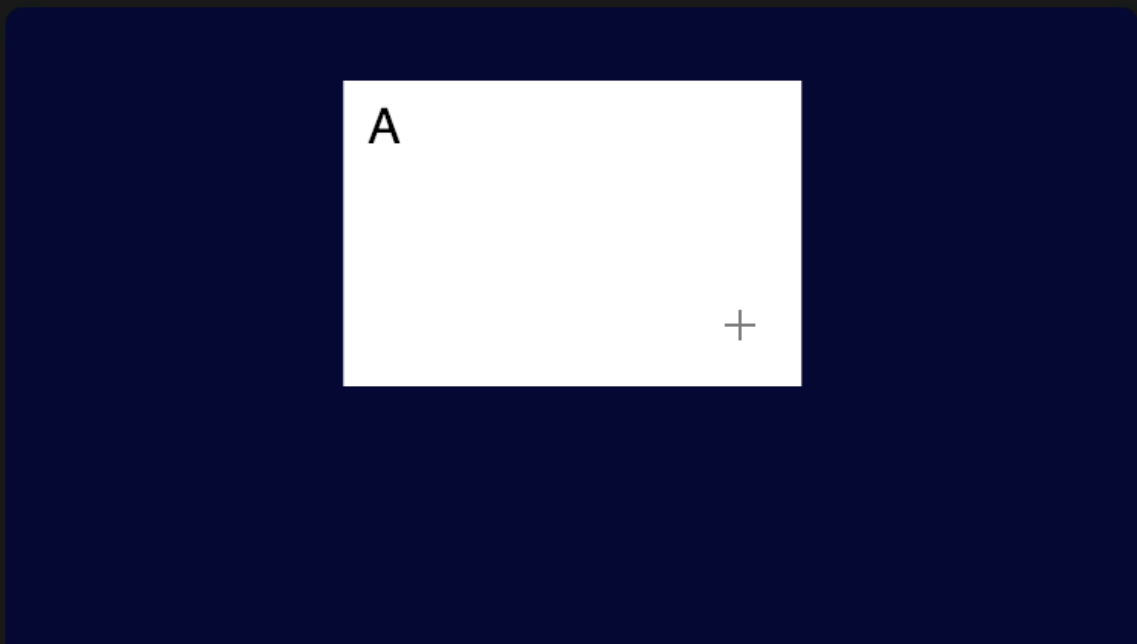


Component prototypes



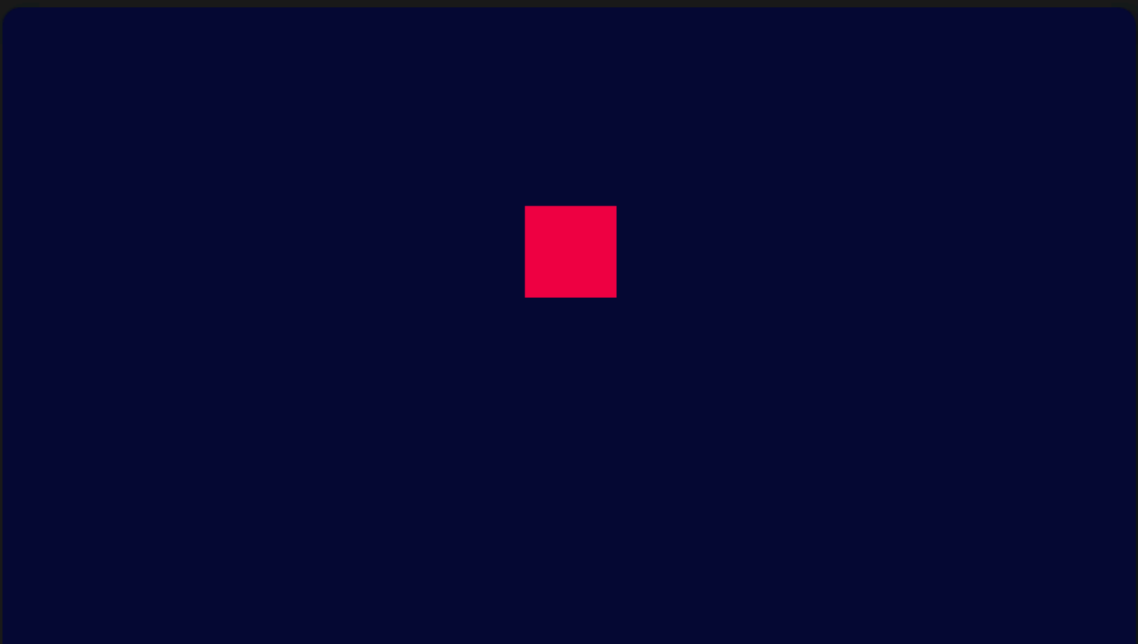
Pulsating Hotspot UI Element

5,731 0 26



Slideup Box

119 0



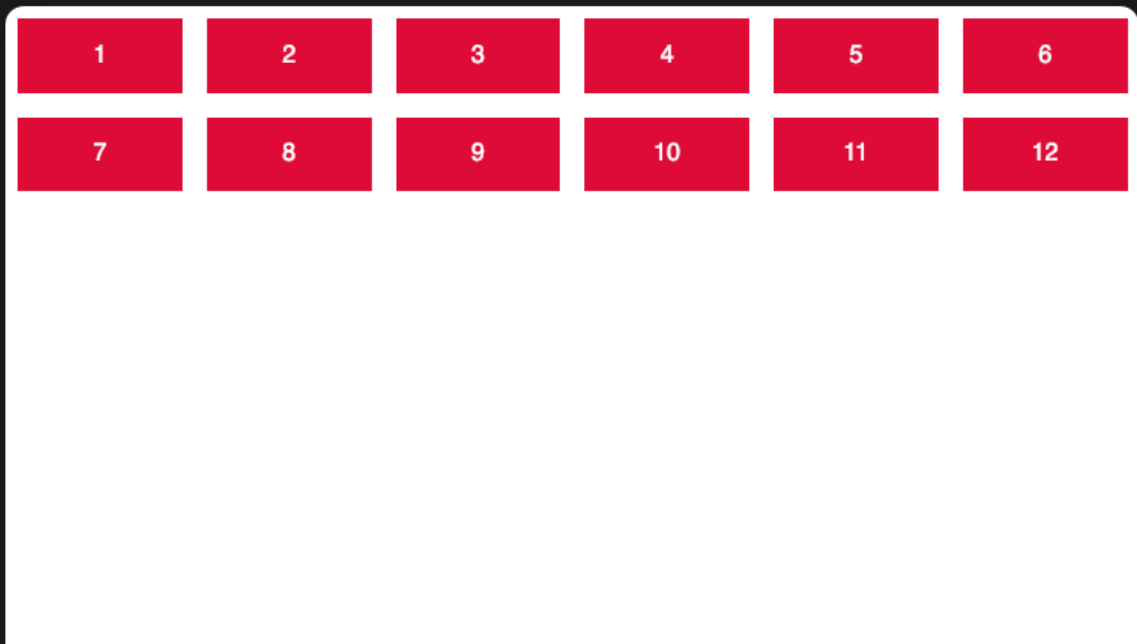
Simple TweenMax State Toggle

218 0

God is in the details, they say
White space provides the silence
We love complexities but hate complications
One of the most important elements in typography is scale and size relationship

Responsive Typography

113 0 1



Gunnars Grid Challenge

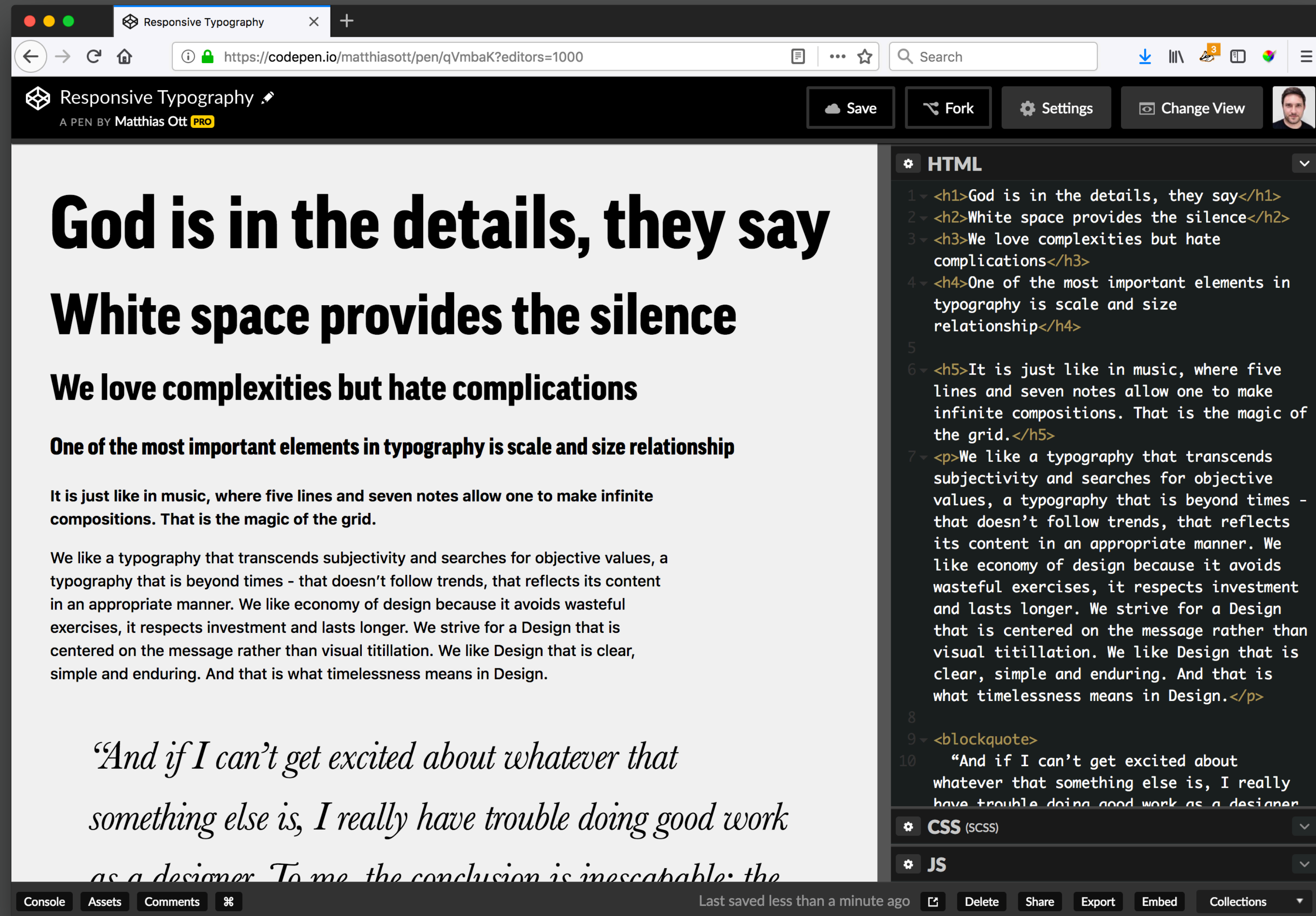
68 0



ExamplesEdit

260 0

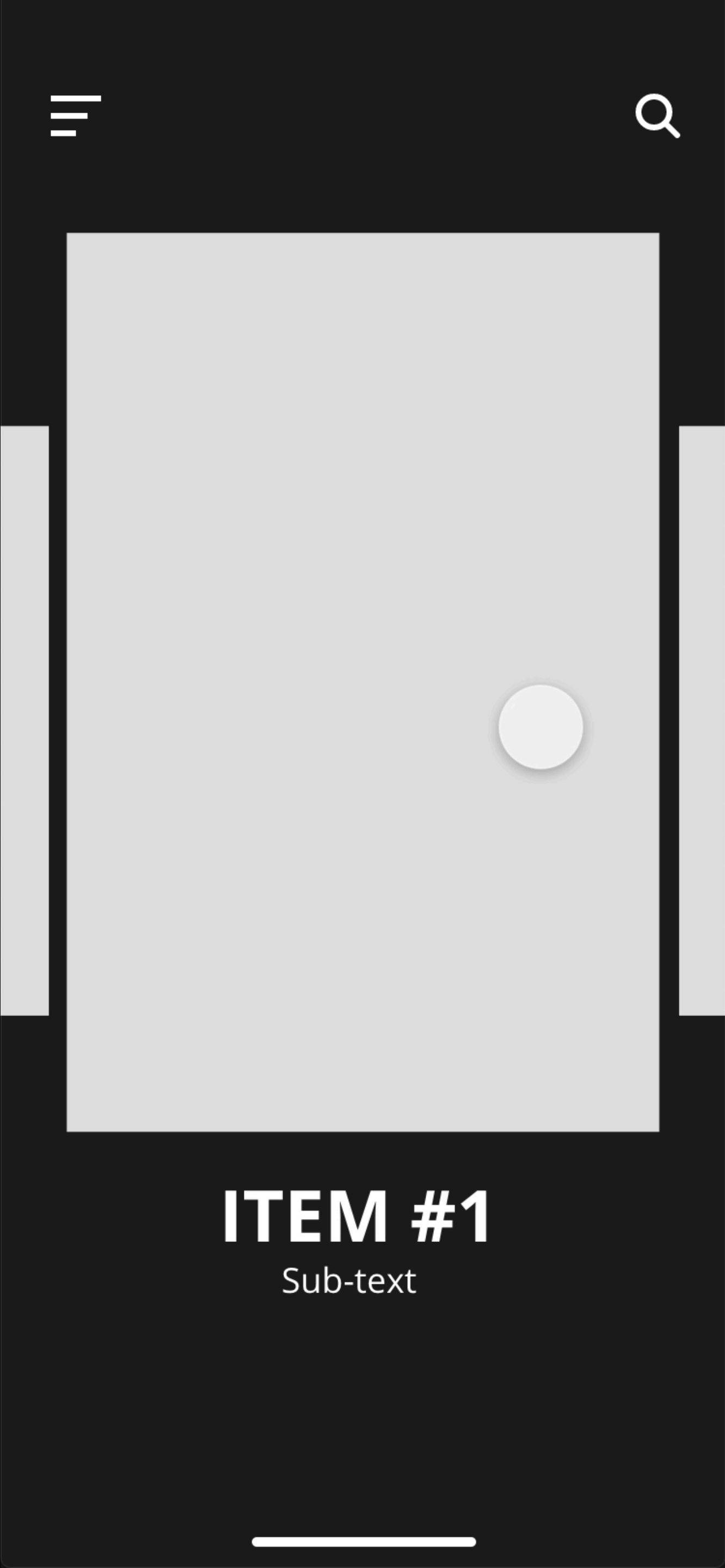
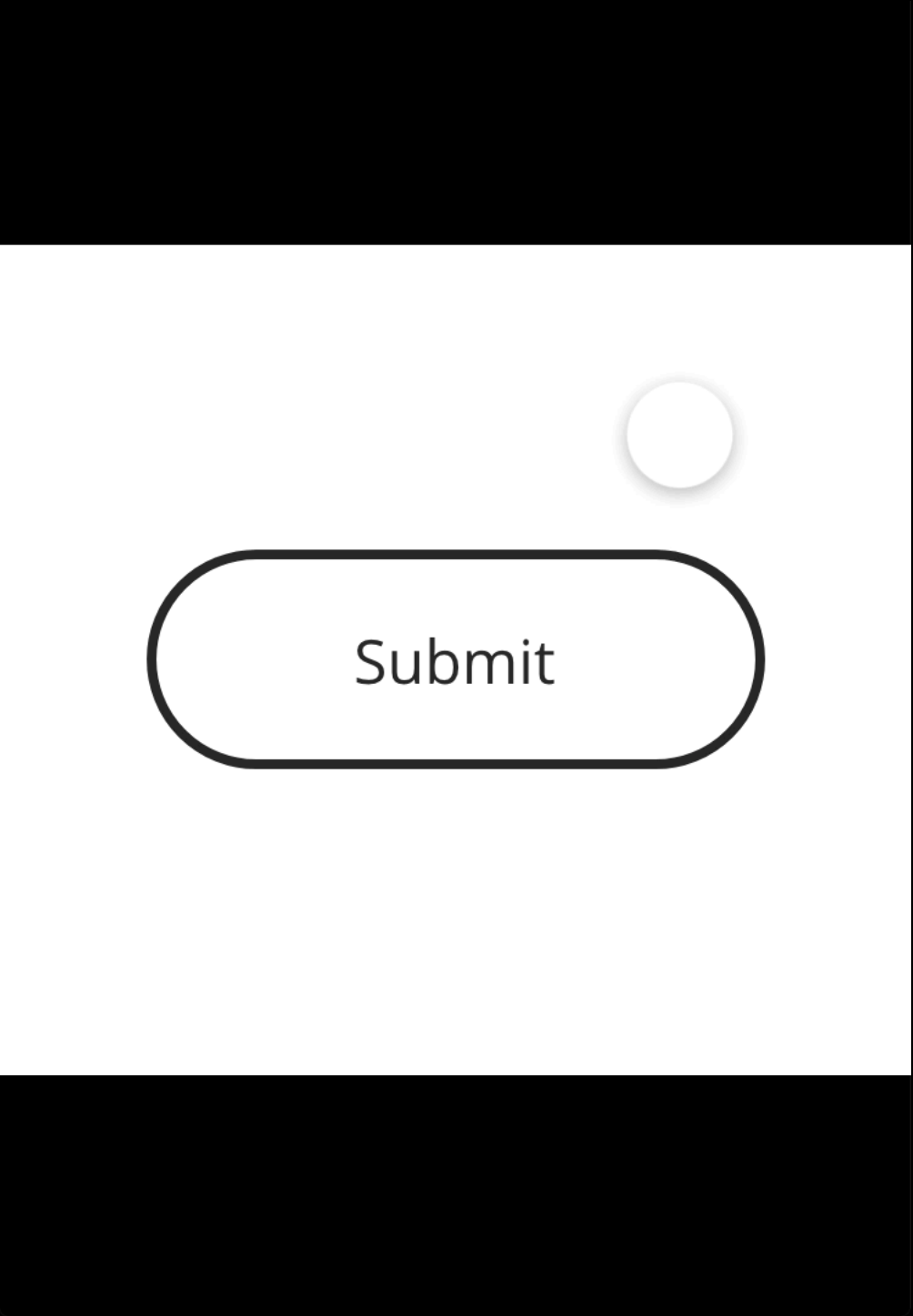
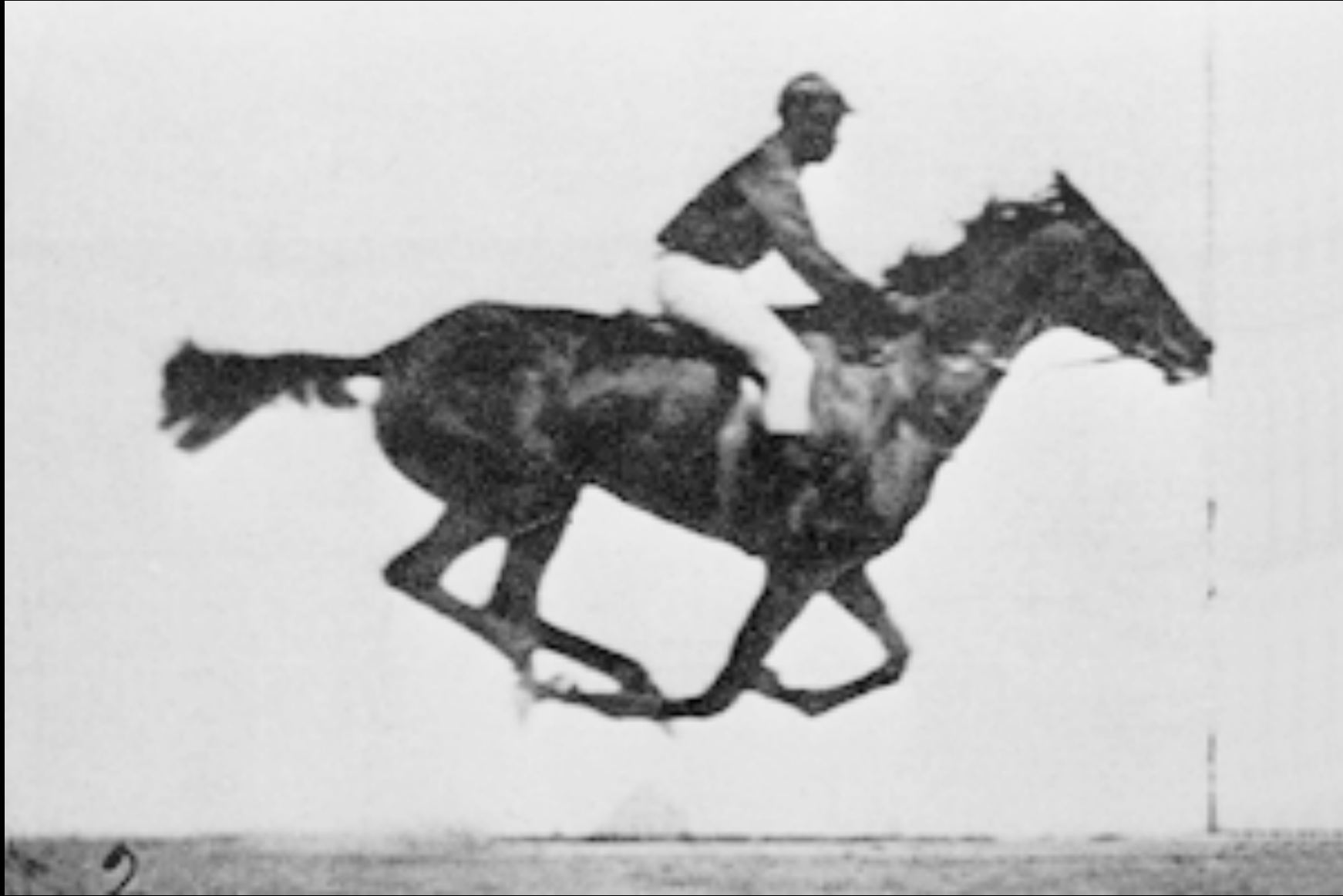
CodePen prototypes



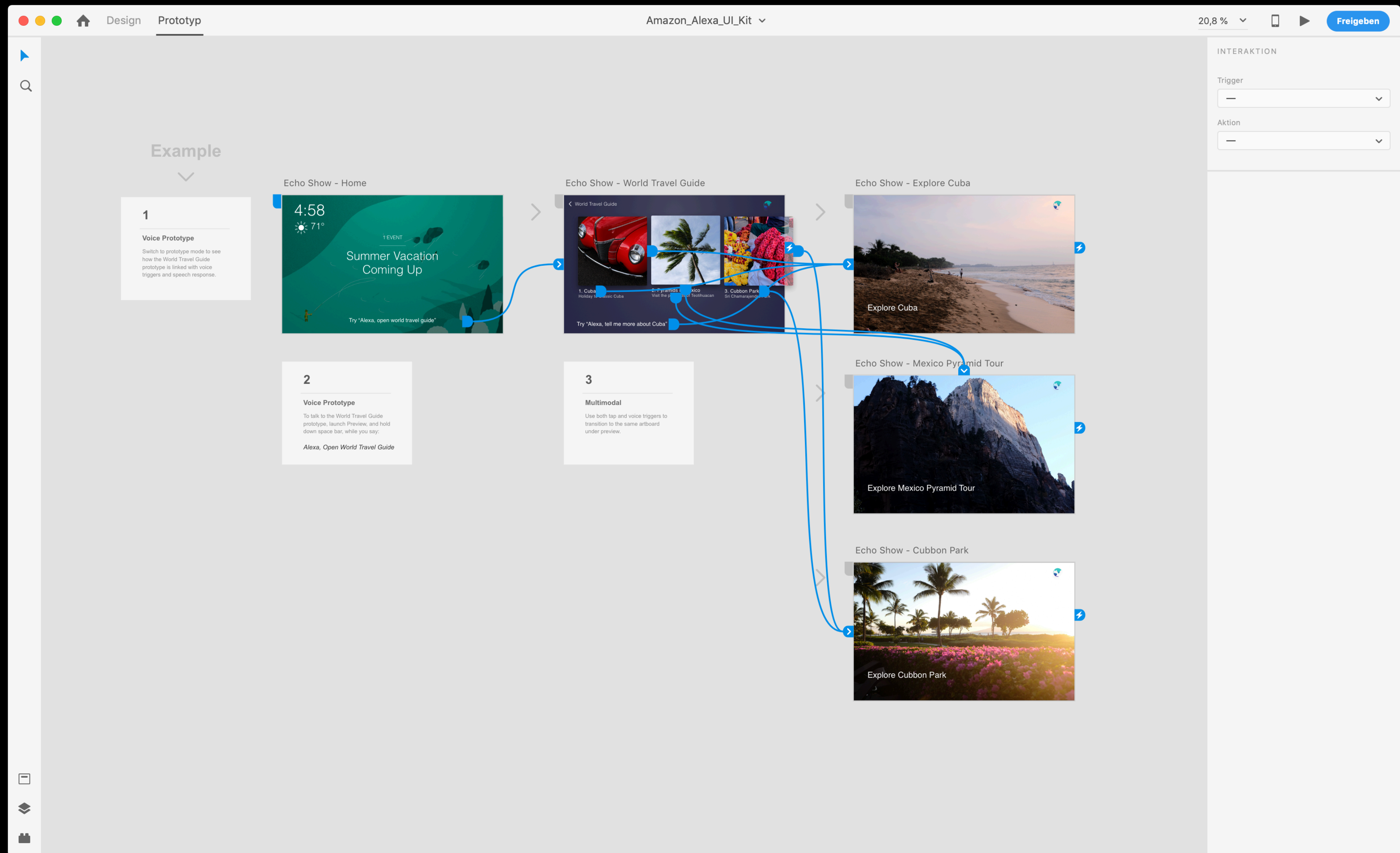
Typography prototypes



Typography prototypes



Animation prototypes



Voice UI prototypes

- ✓ Keep interactions brief
- ✓ Clearly present options
- ✓ Limit to 3 choices at a time
- ✓ Ask for information one piece at a time
- ✓ Indicate when the user needs to provide info
- ✓ Don't assume users know what to do or what will happen

Voice UI prototypes

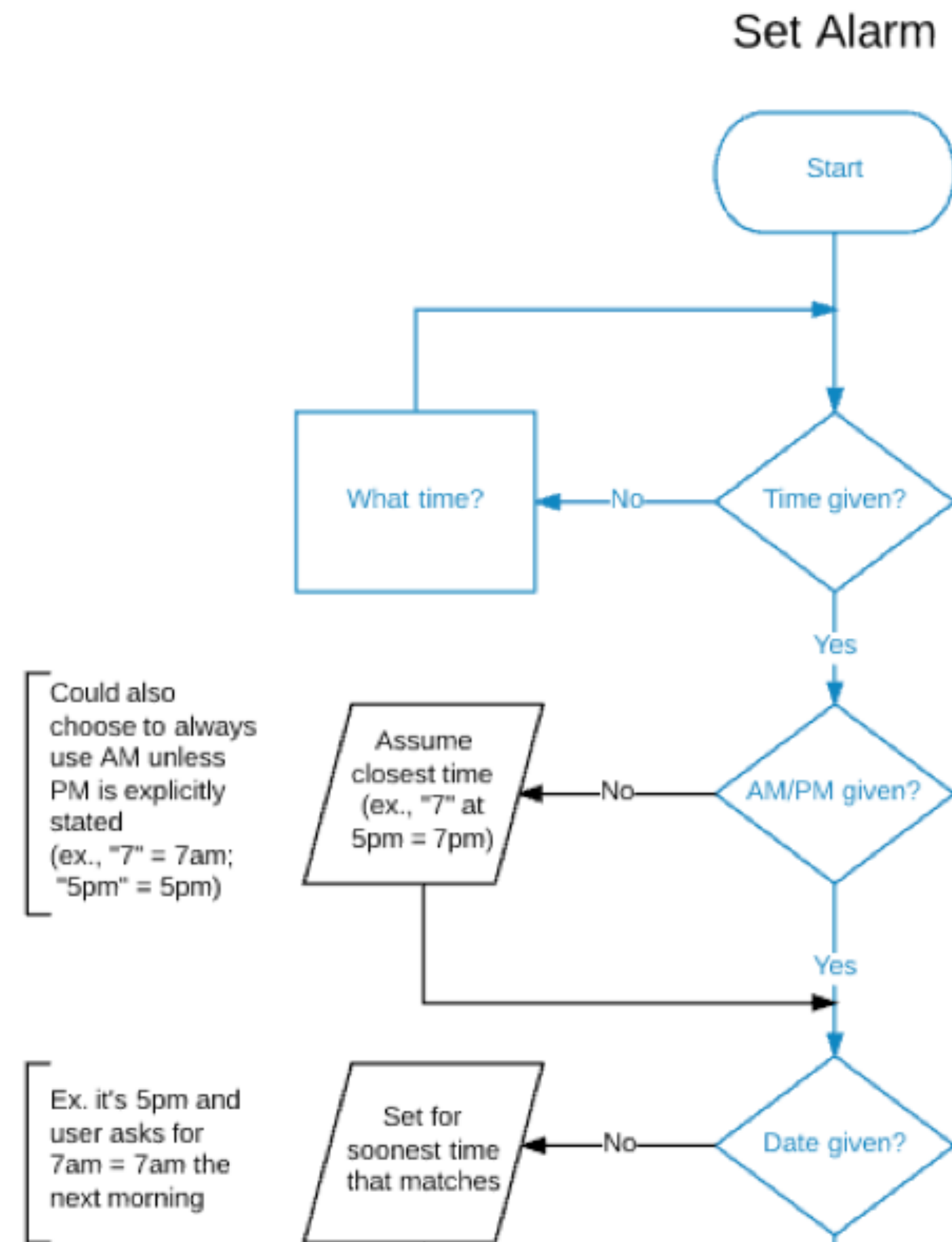
Set Alarm--Future Date

U: Set an alarm

S: Great, set an alarm. For what time?

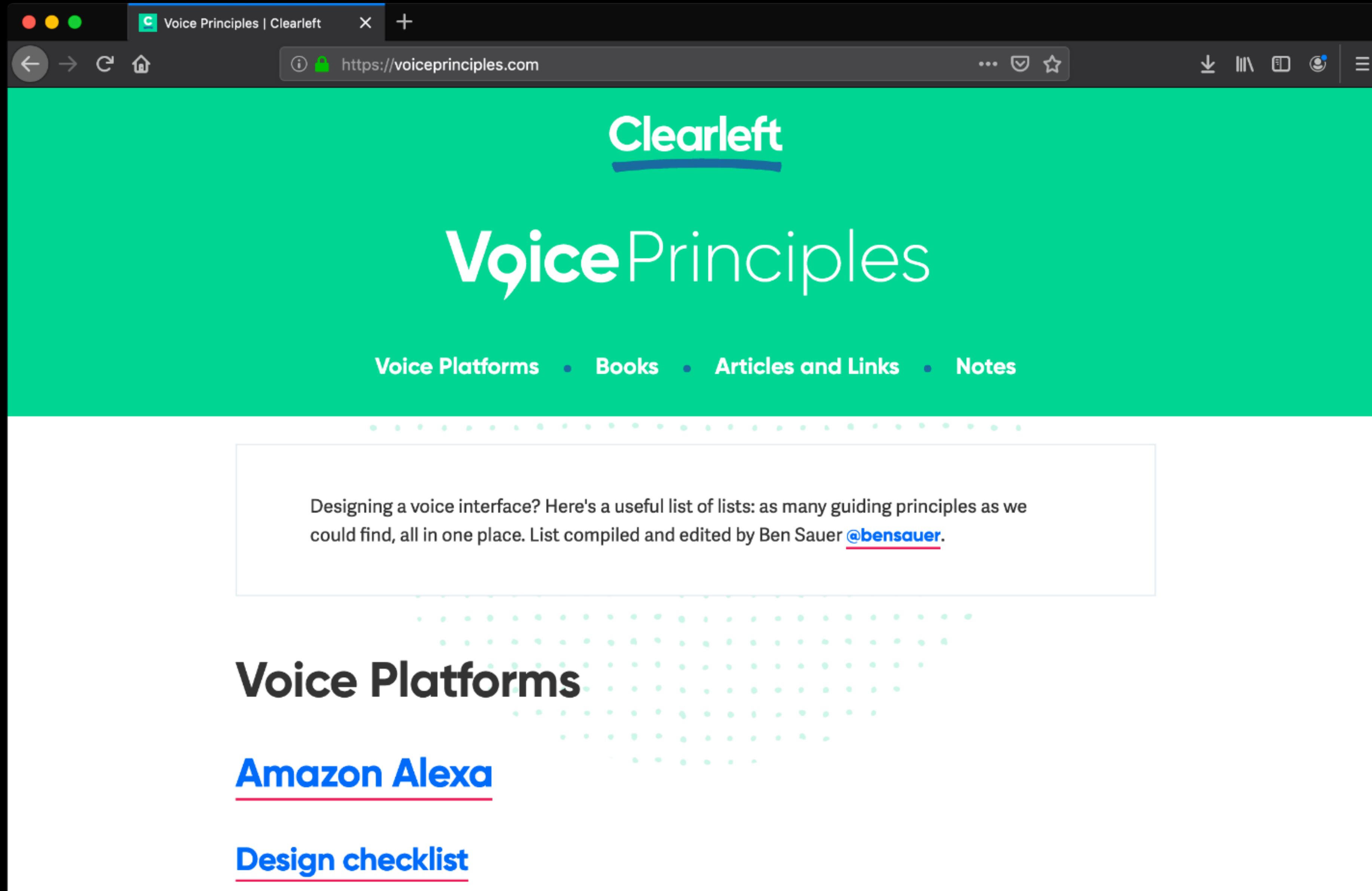
U: 6am on Friday

If alarm is for a future date, set alarm for the day of the week that matches over the following week.



Voice UI prototypes: Start with dialogue flows

<https://voiceprinciples.com/>



O'REILLY®



Designing Voice User Interfaces

PRINCIPLES OF CONVERSATIONAL EXPERIENCES

Cathy Pearl


A BOOK APART

NO
25

Erika Hall

CONVERSATIONAL DESIGN

FOREWORD BY John Maeda



A Prototyping Mindset

O'REILLY®



Prototyping for Designers

DEVELOPING THE BEST DIGITAL & PHYSICAL PRODUCTS

Kathryn McElroy
Foreword by Allan Chochinov

Prototyping for Designers Kathryn McElroy

Danke! 🥰

@m_ott

matthiasott.com