



# Replacing an Image

## How to replace your image:

- Click the image you wish to replace.
- Under the Format pane, go to the Image tab and click Replace.
- To create a black and white image, lower the color saturation to -100%.



# Reading and Writing CSV Files in Python

## Opening and Modifying Files



**Chase DeHan, Ph.D.**

Data Scientist at Step

[linkedin.com/in/chasedehan](https://www.linkedin.com/in/chasedehan) | [www.chasedehan.com](http://www.chasedehan.com)

# Importing with Pandas and NumPy



**Chase DeHan, Ph.D.**

Data Scientist at Step

[linkedin.com/in/chasedehan](https://www.linkedin.com/in/chasedehan) | [www.chasedehan.com](http://www.chasedehan.com)

# Overview

Pandas and NumPy Basics

Importing with Pandas

Reading Multiple Files

Importing with NumPy

# Pandas

**Pandas is a fast, powerful, flexible and easy to use open source data analysis and manipulation tool, built on top of the Python programming language.**



# Pandas Use Cases

**Easy manipulation of tabular data, as in a SQL table or Excel document.**

**Built to integrate with scientific computing libraries, such as optimizations and machine learning**

# Pandas Data Structures

**DataFrame**

2D tabular structure

**Series**

1D labeled array all of one type



# Data Manipulations

**Easy import of data**

**Flexible group by functionality**

**Intuitive merging and joining**

**Time-series functionality**

**Mutability**

**Pandas is easy to work with  
and has fast operations on  
large datasets, but watch for  
caveats on production use.**



# NumPy

**Brings computational power of C and Fortran to Python**

**Heavily used in data-intensive applications where speed is a priority**

**Less intuitive interface than Pandas**



# Reading CSVs

```
import pandas as pd
```

```
pd.read_csv()
```

# Some `read_csv` Arguments

`filepath_or_buffer`

`sep`

`index_col`

`skip_rows`



# Reading Multiple Files

# Steps for Reading Multiple Files

**Identify the files**

Look for all file names in directory

**Iterate**

Iterate over the file names



# Building and Assembling

Create a list

Append next DataFrame to list

Convert list into DataFrame

Make sure all have same format

# NumPy

# Primary NumPy Functions

`np.loadtxt()`

Simpler with uniform data

`np.genfromtxt()`

Provides more flexibility

# Benefits of genfromtxt()

Provides ability to fill missing values

Can use different datatypes for each column

Can have different length rows



|

|

|

# Process for Handling a File

Identify location of  
the file

Open the file

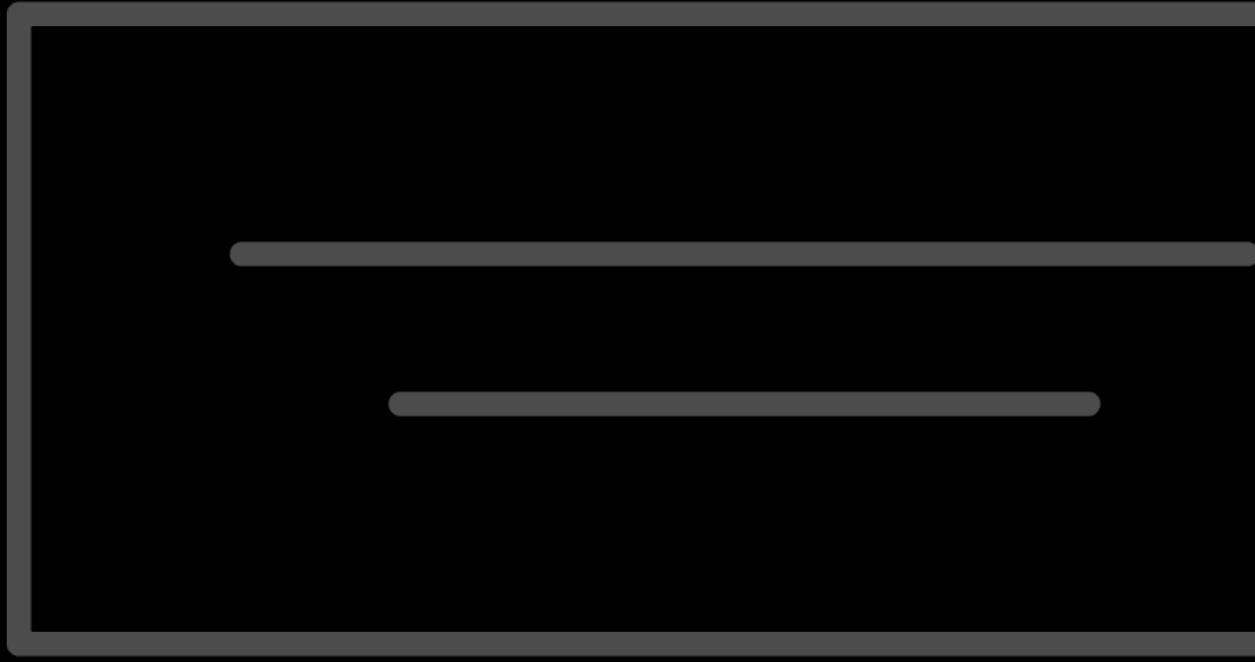
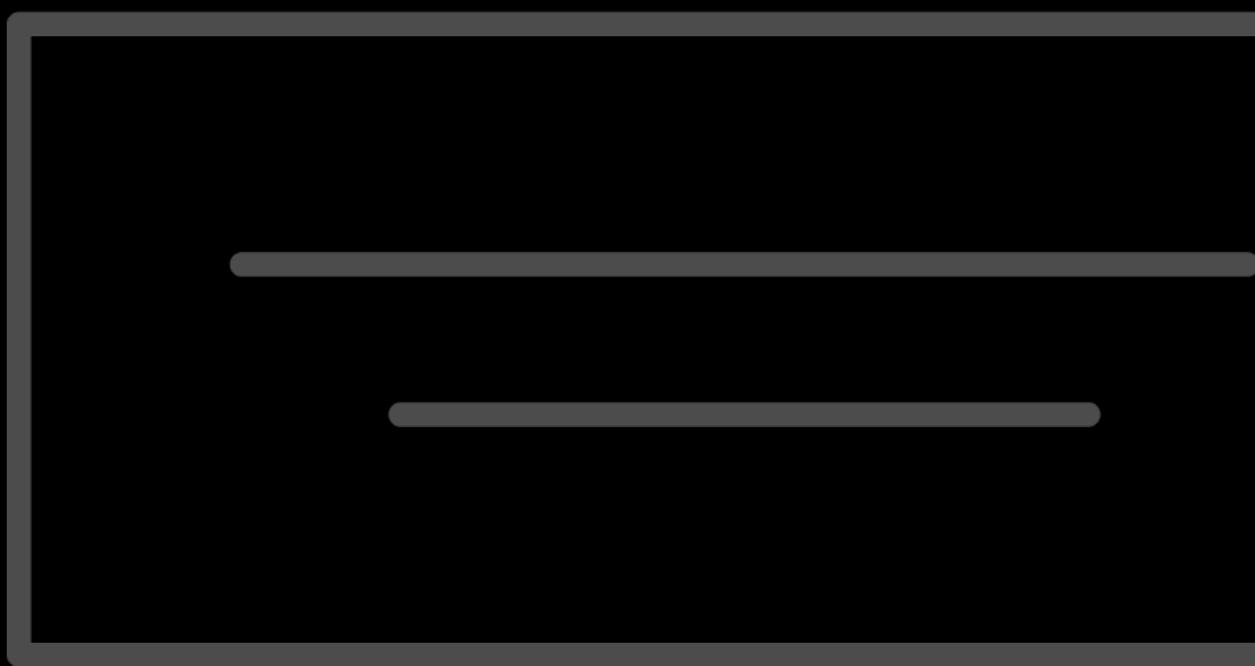
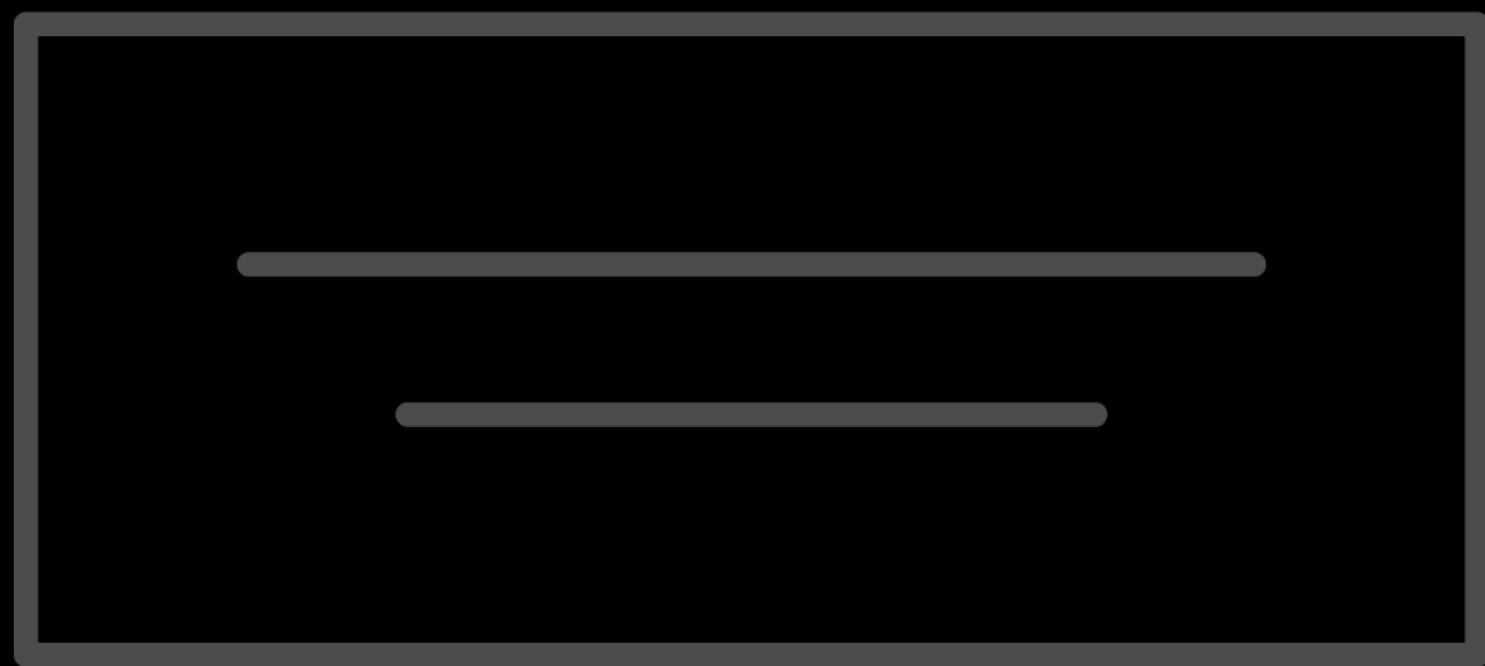
Do something while  
file is open

```
filename = 'name_of_file.txt'  
f = open(filename)  
  
# And then do something with `f`
```

## Opening the file

**Using the `open` method works similar to opening a drawer.  
If you want to look pull stuff out of the drawer you need to do another action.  
After opening a file, you need to do a follow-on step**

# Text Chunking



# **Text Chunking: Two Items with Headers**

## **Talking point one**

**Be concise and keep the  
text to four lines or fewer**

## **Talking point two**

**Be concise and keep the  
text to four lines or fewer**

# **Text Chunking: Two Items**

**Be concise and keep the  
text to four lines or fewer**

**Be concise and keep the  
text to four lines or fewer**

# **Text Chunking: Two Items Outlined**

**Be concise and keep the  
text to four lines or fewer**

**Be concise and keep the  
text to four lines or fewer**

# **Text Chunking: Three Items**

**This is the first  
talking point**

**This is the second  
talking point**

**This is the third  
talking point**

# **Text Chunking: Three Items Outlined**

**This is the first  
talking point**

**This is the second  
talking point**

**This is the third  
talking point**

# **Text Chunking: Four Items**

**This is the first talking point**

**This is the second talking point**

**This is the third talking point**

**This is the fourth talking point**

# **Text Chunking: Four Items Outlined**

**This is the first talking point**

**This is the second talking point**

**This is the third talking point**

**This is the fourth talking point**

# **Text Chunking: Five Items**

**This is the first talking point**

**This is the second talking point**

**This is the third talking point**

**This is the fourth talking point**

**This is the fifth talking point**

# **Text Chunking: Five Items Outlined**

**This is the first talking point**

**This is the second talking point**

**This is the third talking point**

**This is the fourth talking point**

**This is the fifth talking point**

# **Text Chunking: Six Items**

**Thing 1**

**Thing 2**

**Thing 3**

**Thing 4**

**Thing 5**

**Thing 6**

# **Text Chunking: Six Items Outlined**

**Thing 1**

**Thing 2**

**Thing 3**

**Thing 4**

**Thing 5**

**Thing 6**

# Image Chunking

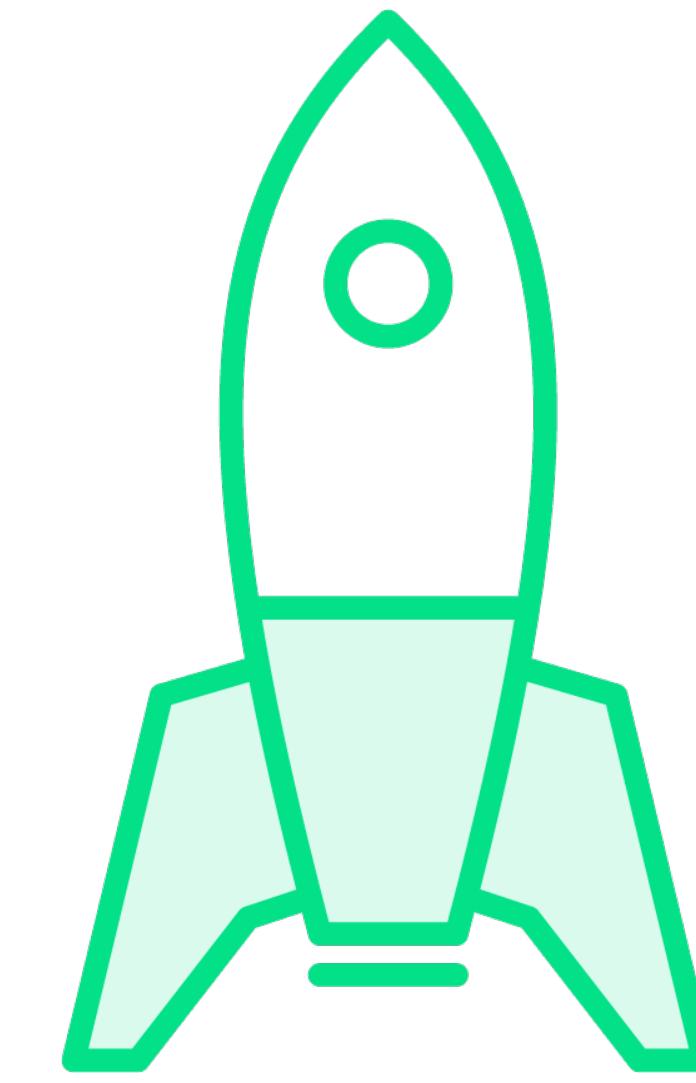


# Icon or Image Chunking: Two Items with Headers



## Informative Title

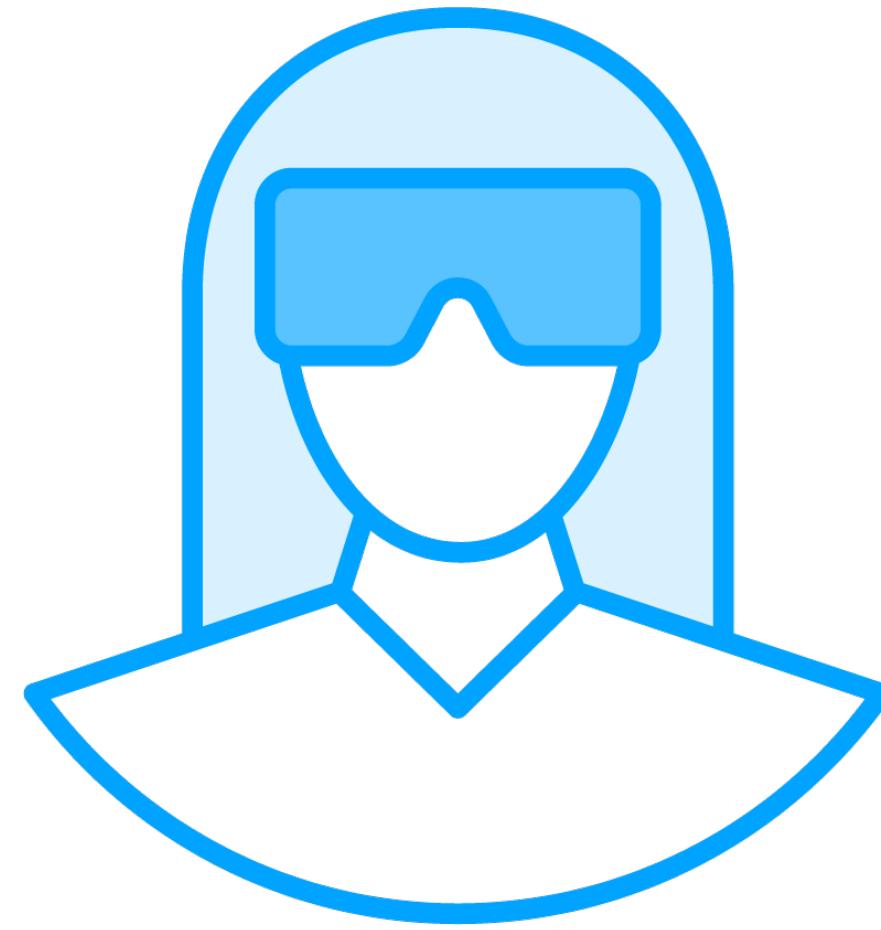
Some information about this graphic goes here and four lines or fewer is best



## Informative Title

Some information about this graphic goes here and four lines or fewer is best

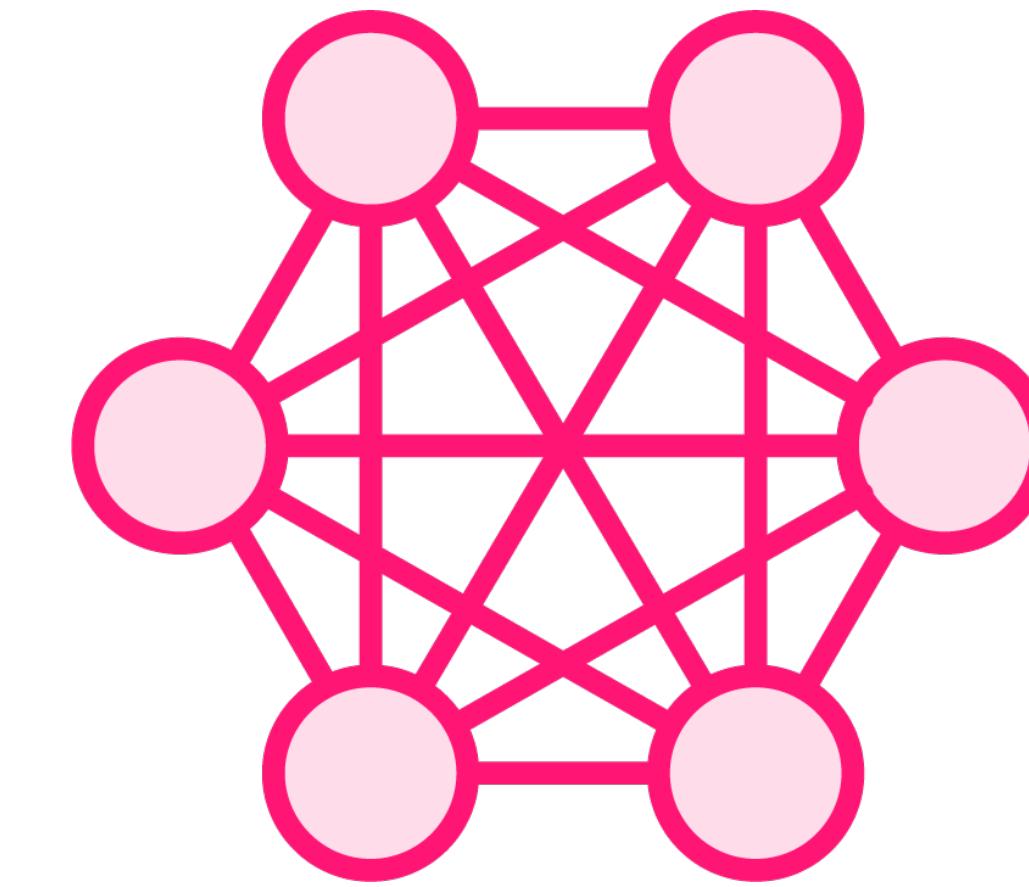
# Icon or Image Chunking: Three Items



Some information about  
this graphic goes here



Some information about  
this graphic goes here

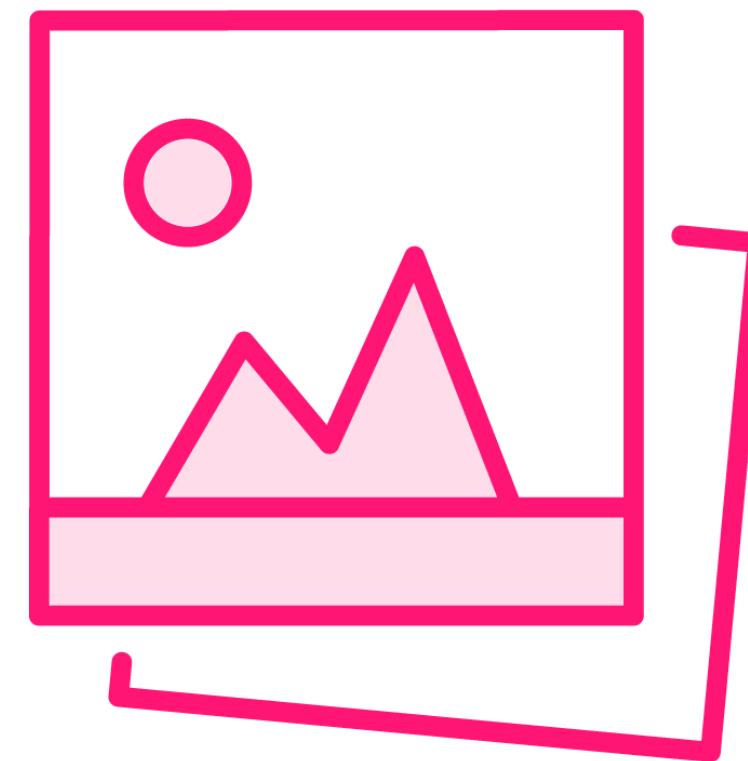


Some information about  
this graphic goes here

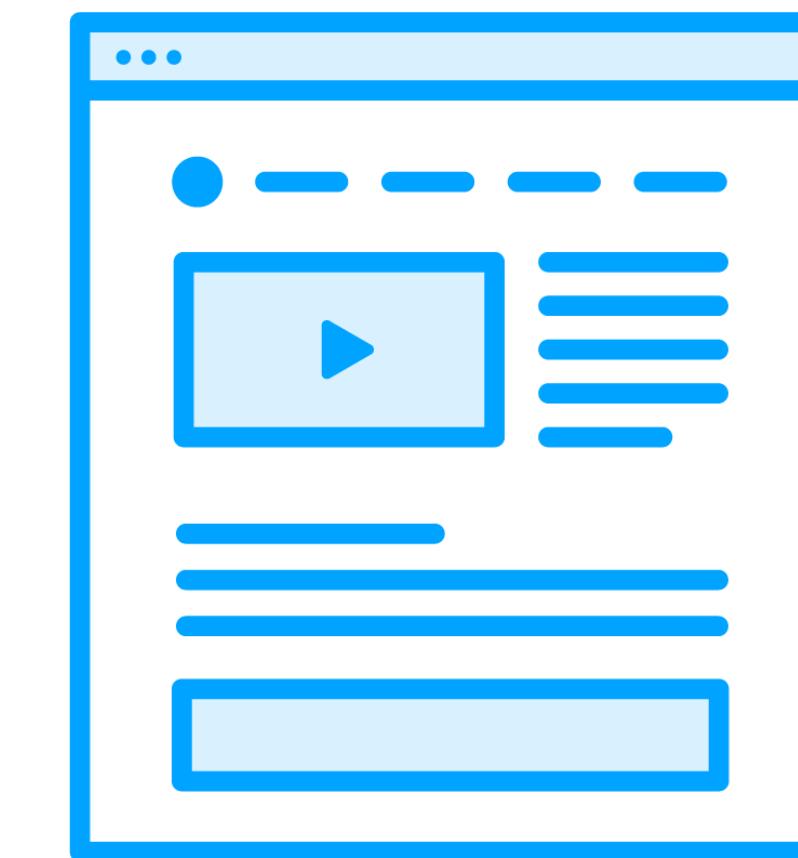
# Icon or Image Chunking: Four Items



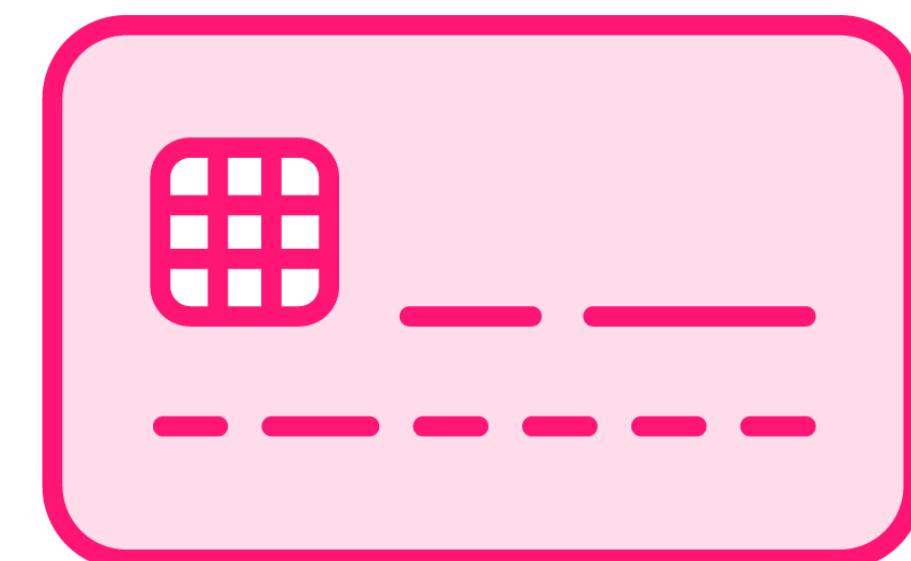
**Some info goes here; three lines or fewer is best**



**Some info goes here; three lines or fewer is best**

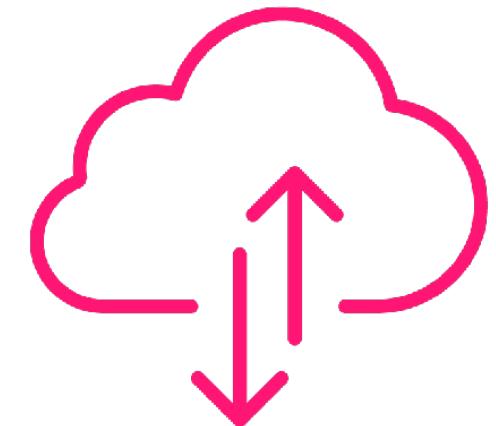


**Some info goes here; three lines or fewer is best**



**Some info goes here; three lines or fewer is best**

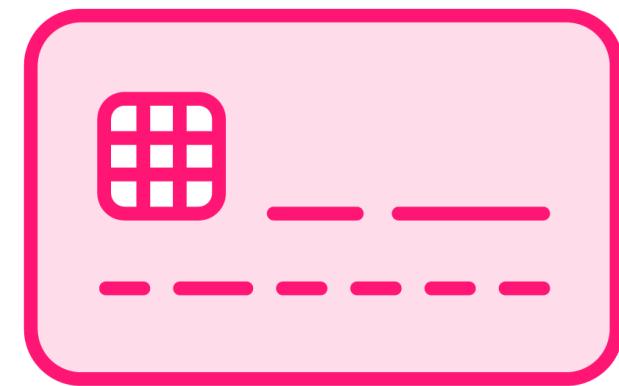
# Icon Only Image Chunking: Six Items



Cloud transfer



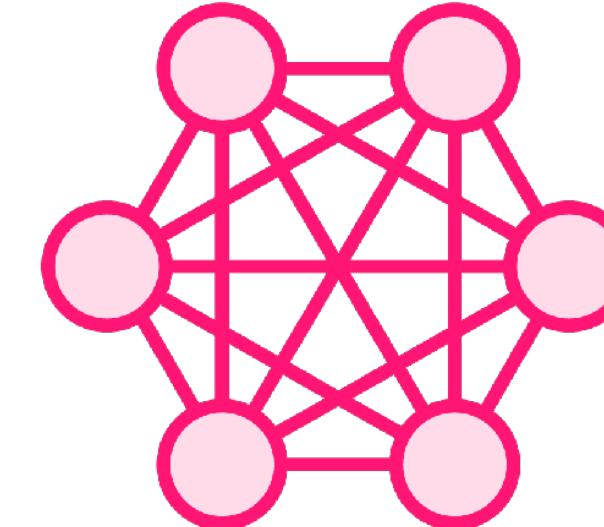
Email



ID card



Game controller



Network map



VR headset

# Icon or Image Chunking: Two Items with Headers



# Partner pairing

**Some information about this graphic goes here and four lines or fewer is best**



# Brainstorming ideas

**Some information about this graphic goes here and four lines or fewer is best**

# Circle Icon or Image Chunking: Two Items



**Partner pairing**



**Brainstorming ideas**

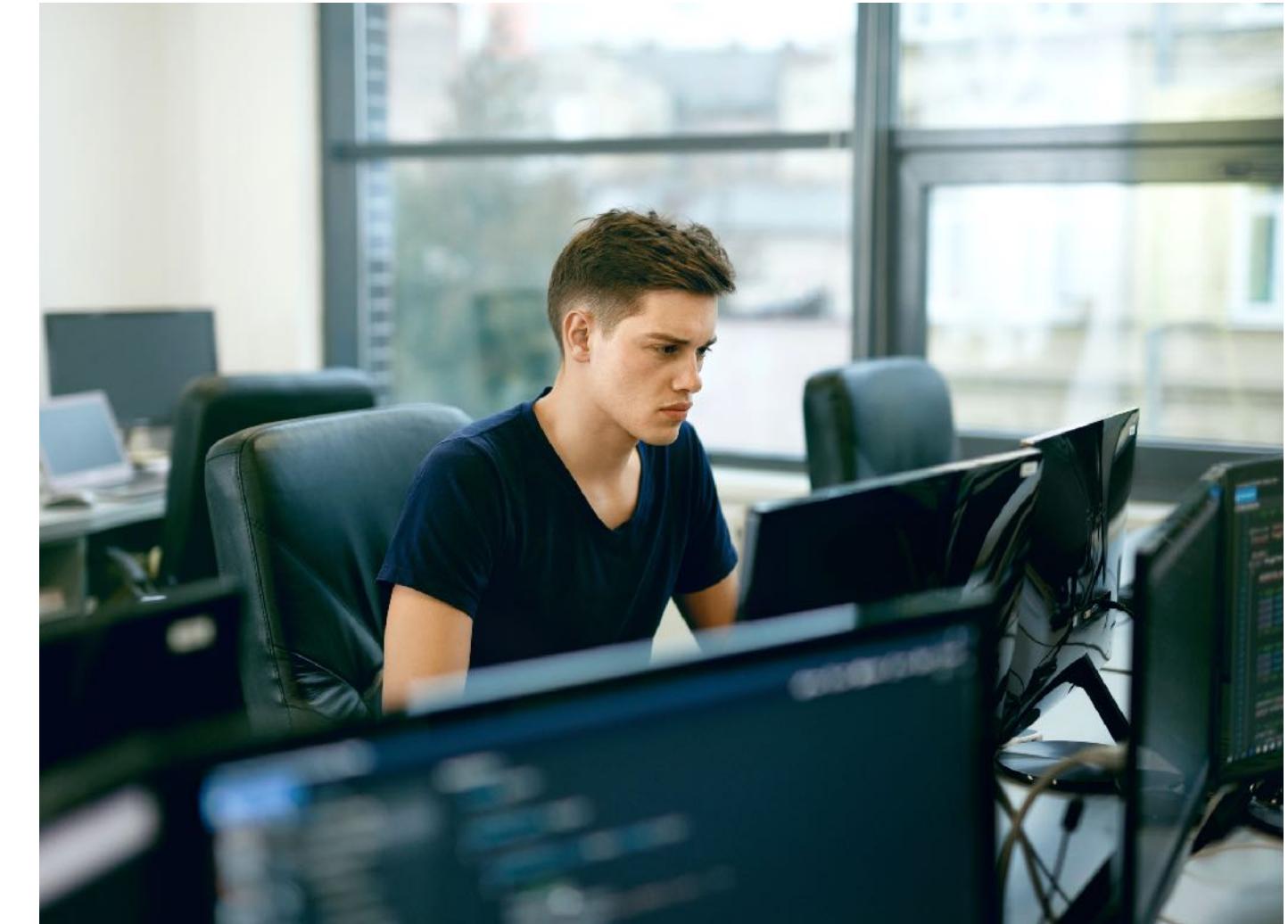
# Icon or Image Chunking: Three Items



Work together



Phone a colleague



Write the code

# Circle Image Chunking: Four Items



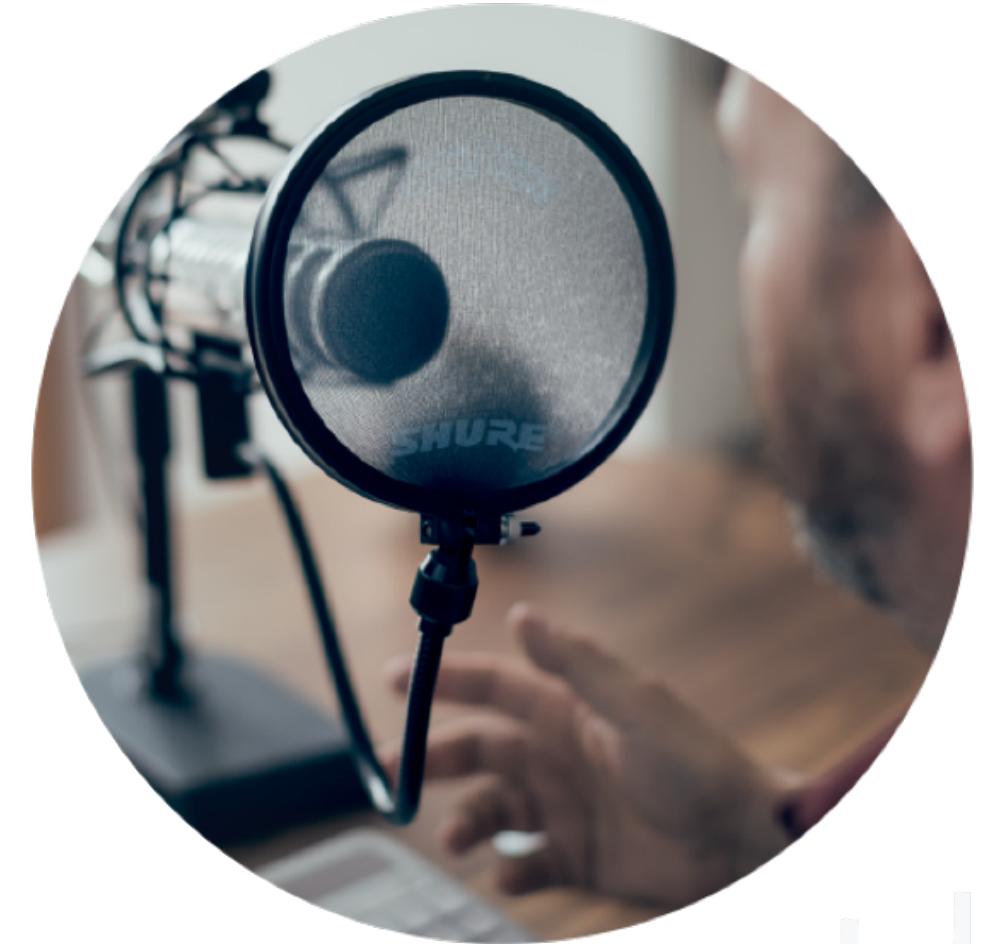
**Write a script**



**Review it**



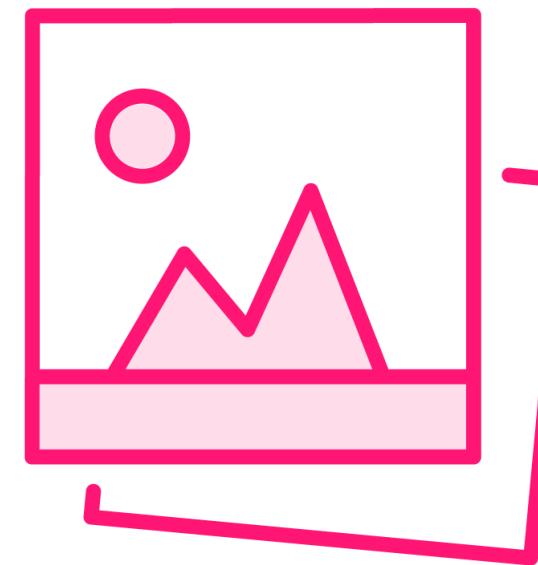
**Record audio**



**Create a demo**

# Description Text and Three Item Icons with Headers

Add a short bit of description text in this area. Keep it short and simple.



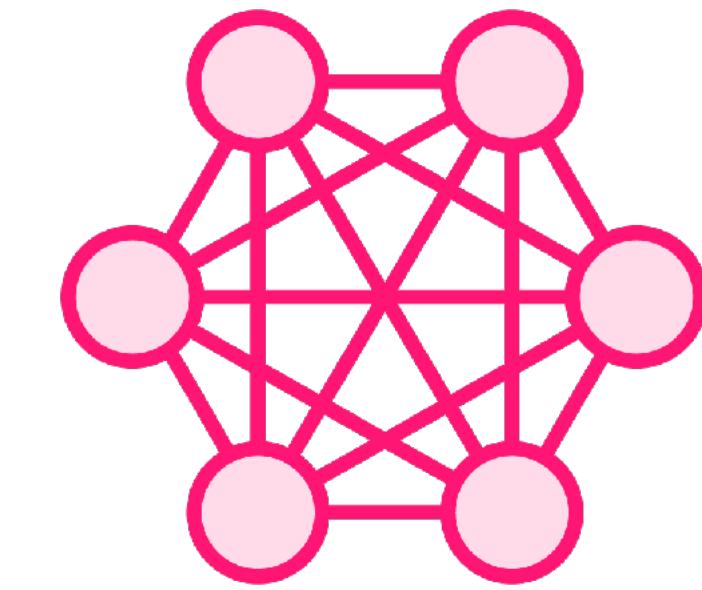
## Analysis

Add a description here on these lines. Keep it short and simple.



## Process

Add a description here on these lines. Keep it short and simple.



## Work List

Add a description here on these lines. Keep it short and simple.

# Bullet Lists

- - -
- - -
- - -
- - -
- - -
- - -

**Animation built in**

**Bullet alternative**

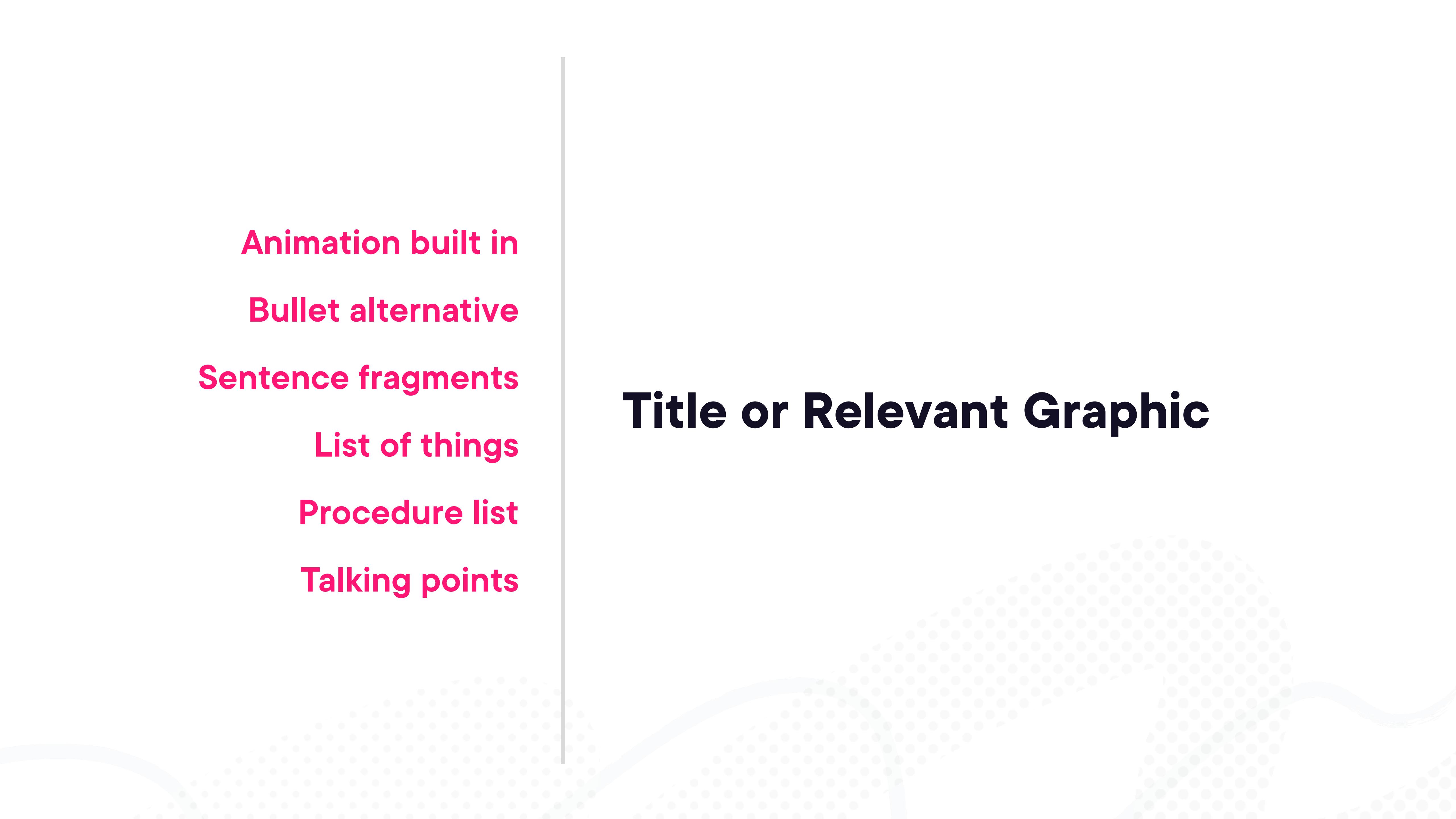
**Sentence fragments**

**List of things**

**Procedure list**

**Talking points**

**Title or Relevant Graphic**



**Animation built in**

**Bullet alternative**

**Sentence fragments**

**List of things**

**Procedure list**

**Talking points**



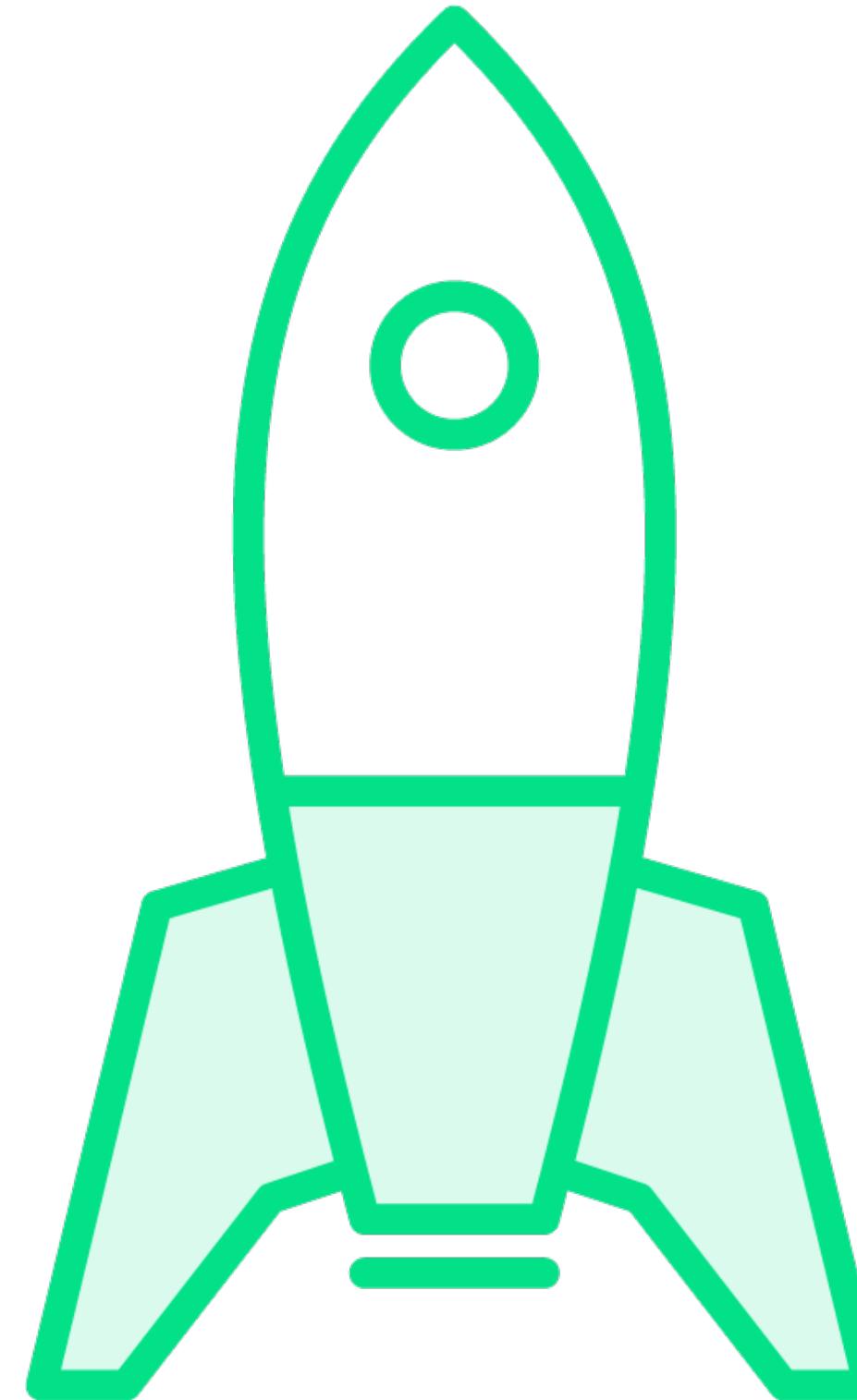
# Title or Relevant Graphic

Animation built in

Room for a bit more text

Use this layout for:

- Longer sentence fragments
- List of things
- Procedure list
- Talking points



**Animation built in**

**Room for a bit more text**

**Use this layout for:**

- Longer sentence fragments
- List of things
- Procedure list
- Talking points

# Title | Image Left | Bullets Right



**Animation built in**

**Room for a bit more text**

**Use this layout for:**

- Longer sentence fragments
- List of things
- Procedure list
- Talking points

# Title | Image Right | Bullets Left

**Animation built in**  
**Room for a bit more text**  
**Use this layout for:**  
Longer sentence fragments  
List of things  
Procedure list  
Talking points





## **Photo Circle with Text**

**Works better with photos than with icons**

**Photos must be high-quality and copyright-safe**

**Re-center text boxes vertically once text  
is entered**



**The main image bleeds off three edges**

**Graphic should fill the entire space**

- Graphic must be high-quality and copyright-safe

**Text animation is built in**



# Left Image with Title

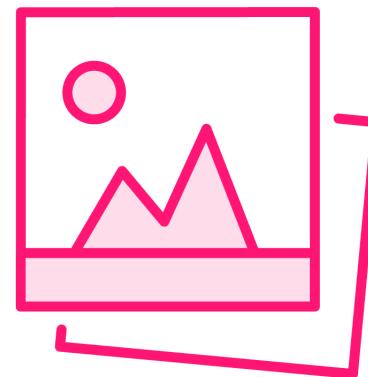
**The main image bleeds off three edges**

**Graphic should fill the entire space**

- Graphic must be high-quality and copyright-safe

**Text animation is built in**

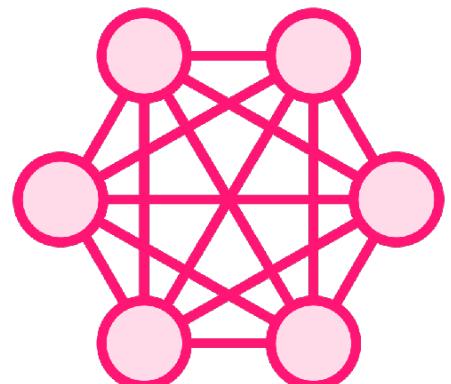
# Three Item List with Icons



**An image chunking option for when you have longer text**



**Be concise and keep each bullet to 3 lines or fewer**

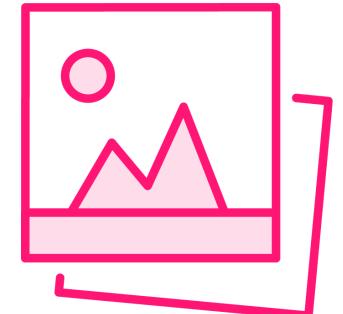


**Add relevant icons on the left for each text item on the right**

# Four Item List with Icons



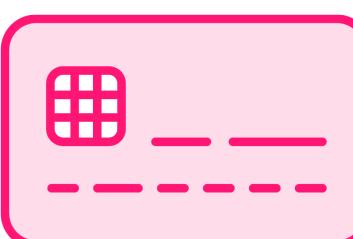
An image chunking option for when you have longer text



Be concise and keep each bullet to 2 lines or fewer



Add relevant icons on the left for each text item on the right



An alternative to bullets

# Five Item List with Icons



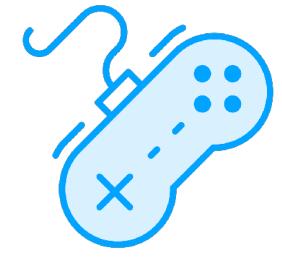
An image chunking option for when you have longer text



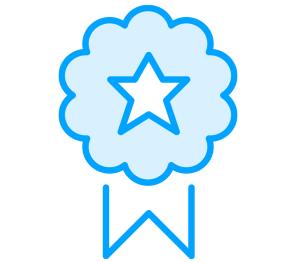
Sometimes four of these items aren't enough



Add relevant icons on the left for each text item on the right

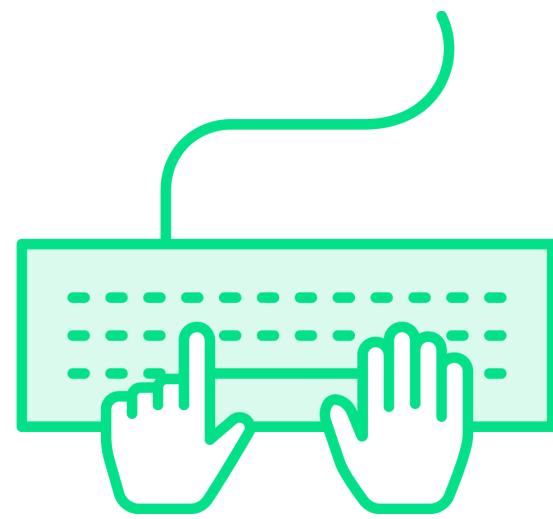


An image chunking option for when you have longer text



Be concise and limit the text to one line

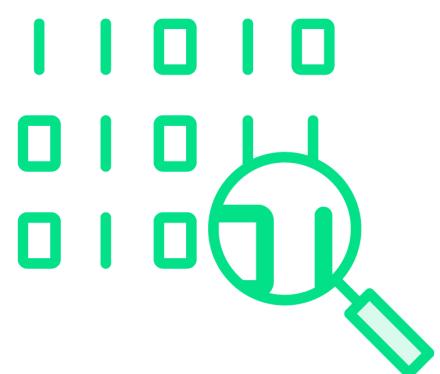
# Two Column Six Item List with Icons



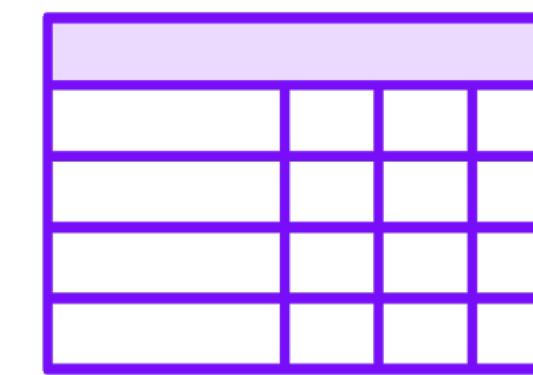
**Program**



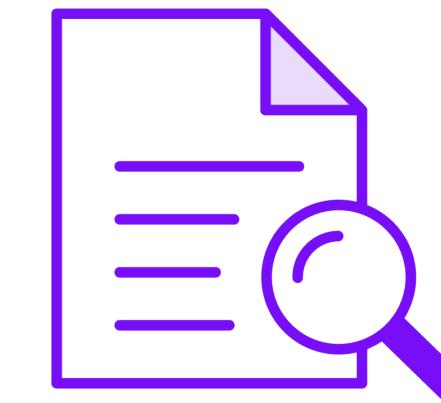
**Take a break and read**



**Check the data**



**Export all that data**



**Write up a case study**



**It's all under control**

# Code

Refer to [Author Kit](#) for additional guidance

# Code Snippet | Light

```
<div class="row carousel-indicators">
    <div style="background-color:red;" class="col-md-4" data-target="#homeCarousel"
data-slide-to="0" class="active">
        </div>
    <div style="background-color:green;" class="col-md-4" data-
target="#homeCarousel" data-slide-to="1" class="active">
        </div>
</div>
```

# Code Snippet | Dark

```
<div class="row carousel-indicators">
    <div style="background-color:red;" class="col-md-4" data-target="#homeCarousel"
data-slide-to="0" class="active">
        </div>
    <div style="background-color:green;" class="col-md-4" data-
target="#homeCarousel" data-slide-to="1" class="active">
        </div>
</div>
```

```
filename = 'name_of_file.txt'  
f = open(filename)  
  
# And then do something with `f`
```

## Opening the file

**Using the `open` method works similar to opening a drawer.  
If you want to look pull stuff out of the drawer you need to do another action.  
After opening a file, you need to do a follow-on step**

```
<div class="row carousel-indicators">
  <div style="background-color:red;" class="col-md-4" data-target="#homeCarousel" data-slide-to="0" class="active">
    </div>
  <div style="background-color:green;" class="col-md-4" data-target="#homeCarousel" data-slide-to="1" class="active">
    </div>
</div>
```

## Code Snippet with Info | Dark

**Information about the code above. Code should be in Roboto Mono font, while slide title and supplemental text should remain in PS TT Commons.**

```
// Put code on this side
```

```
let website = {  
  name: 'Pluralsight',  
  url: 'https://pluralsight.com'  
};
```

```
function makeUrl() {}
```

```
let sites = []  
sites.push(website)
```

```
console.log(sites[0].name)
```

◀ Line up with these notes

◀ Create an object

◀ Define a function

◀ Add the object to an array

◀ Log the site name to the console

```
// Put code on this side
```

```
let website = {  
  name: 'Pluralsight',  
  url: 'https://pluralsight.com'  
};
```

```
function makeUrl() {}
```

```
let sites = []  
sites.push(website)
```

```
console.log(sites[0].name)
```

◀ Line up with these notes

◀ Create an object

◀ Define a function

◀ Add the object to an array

◀ Log the site name to the console

# Title and Tab for Filename

Add a line of text here if needed

**Filename.code**

```
<div class="row carousel-indicators">
    <div style="background-color:red;" class="col-md-4" data-target="#homeCarousel"
data-slide-to="0" class="active">
        </div>
    <div style="background-color:green;" class="col-md-4" data-
target="#homeCarousel" data-slide-to="1" class="active">
        </div>
</div>
```

# Title and Tab for Filename

Add a line of text here if needed

Filename.code

```
<div class="row carousel-indicators">
    <div style="background-color:red;" class="col-md-4" data-target="#homeCarousel"
data-slide-to="0" class="active">
        </div>
    <div style="background-color:green;" class="col-md-4" data-
target="#homeCarousel" data-slide-to="1" class="active">
        </div>
</div>
```

# Title and Two Tabs

Add a line of text here if needed

Filename.here

```
<div style="background-color:red;"  
      class="col-md-4" data-  
      target="#homeCarousel" data-slide-  
      to="0"  
      class="active">  
</div>
```

Filename.here

```
<div style="background-color:red;"  
      class="col-md-4" data-  
      target="#homeCarousel" data-slide-  
      to="0"  
      class="active">  
</div>
```

# Title and Two Tabs

Add a line of text here if needed

Filename.here

```
<div style="background-color:red;"  
      class="col-md-4" data-  
      target="#homeCarousel" data-slide-  
      to="0"  
      class="active">  
</div>
```

Filename.here

```
<div style="background-color:red;"  
      class="col-md-4" data-  
      target="#homeCarousel" data-slide-  
      to="0"  
      class="active">  
</div>
```

# Title and Tab with Output | Vertical

Add a line of text here if needed

Filename.here

```
<div class="row carousel-indicators">
  <div style="background-color:red;" class="col-md-4" data-target="#homeCarousel" data-slide-to="0" class="active">
    </div>
  <div style="background-color:green;" class="col-md-4" data-target="#homeCarousel" data-slide-to="1" class="active">
    </div>
</div>
```

> Console

# Title and Tab with Output | Vertical

Filename.nere

```
<div class="row carousel-indicators">
  <div style="background-color:red;" class="col-md-4" data-target="#homeCarousel" data-slide-to="0" class="active">
    </div>
    <div style="background-color:green;" class="col-md-4" data-target="#homeCarousel" data-slide-to="1" class="active">
      </div>
</div>
```

> Console

# Title and Tab with Output | Horizontal

Add a line of text here if needed

**Filename.here**

```
<div style="background-color:red;"  
      class="col-md-4" data-  
      target="#homeCarousel" data-slide-to="0"  
      class="active">  
</div>
```

> Code output or other items

# Title and Tab with Output | Horizontal

Add a line of text here if needed

Filename.here

```
<div style="background-color:red;"  
      class="col-md-4" data-  
      target="#homeCarousel" data-slide-to="0"  
      class="active">  
</div>
```

> Code output or other items

# Title Left and Filename at top

Filename.here

```
<div class="row carousel-indicators">
    <div style="background-color:red;" class="col-md-4" data-target="#homeCarousel" data-slide-to="0" class="active">
        </div>
    <div style="background-color:green;" class="col-md-4" data-target="#homeCarousel" data-slide-to="1" class="active">
        </div>
</div>
```

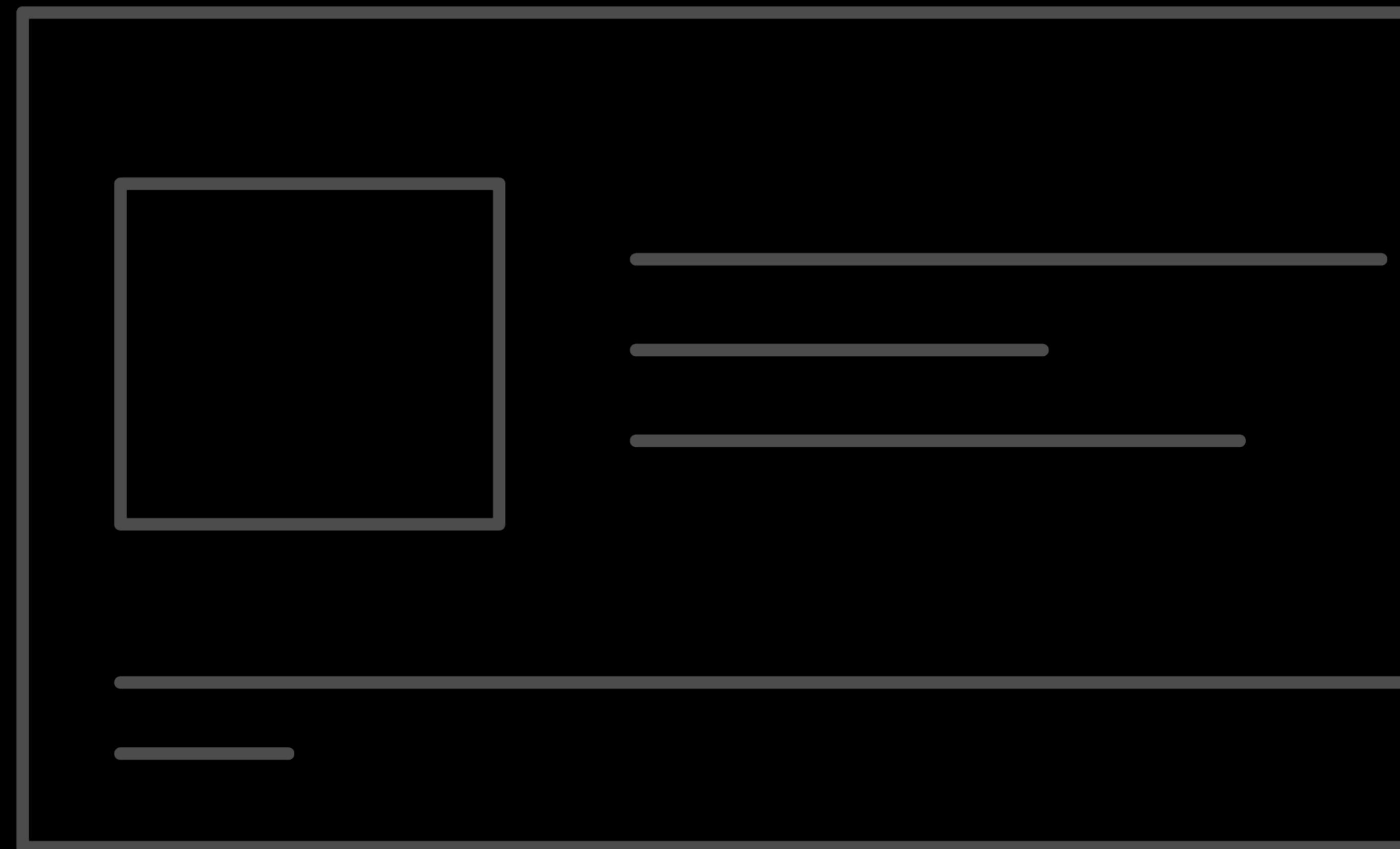
# Title Left and Filename at top

Filename.here

```
<div class="row carousel-indicators">
    <div style="background-color:red;" class="col-md-4" data-target="#homeCarousel" data-slide-to="0" class="active">
        </div>
    <div style="background-color:green;" class="col-md-4" data-target="#homeCarousel" data-slide-to="1" class="active">
        </div>
</div>
```

# Citations

Refer to [Author Kit](#) for additional guidance



# Citation Option

---

Add text here

## More Information

**Title of Pluralsight Course**

**Author Name**



# Resources Referenced in this Course

Microsoft Docs, [Update Management Overview](#)

Stephen Covey, **The 7 Habits of Highly Effective People**

Add relevant icons on the left for each text item on the right

Author/Source, Title, Link/Short URL

# Comparison Slides

# Comparison: Point-by-Point

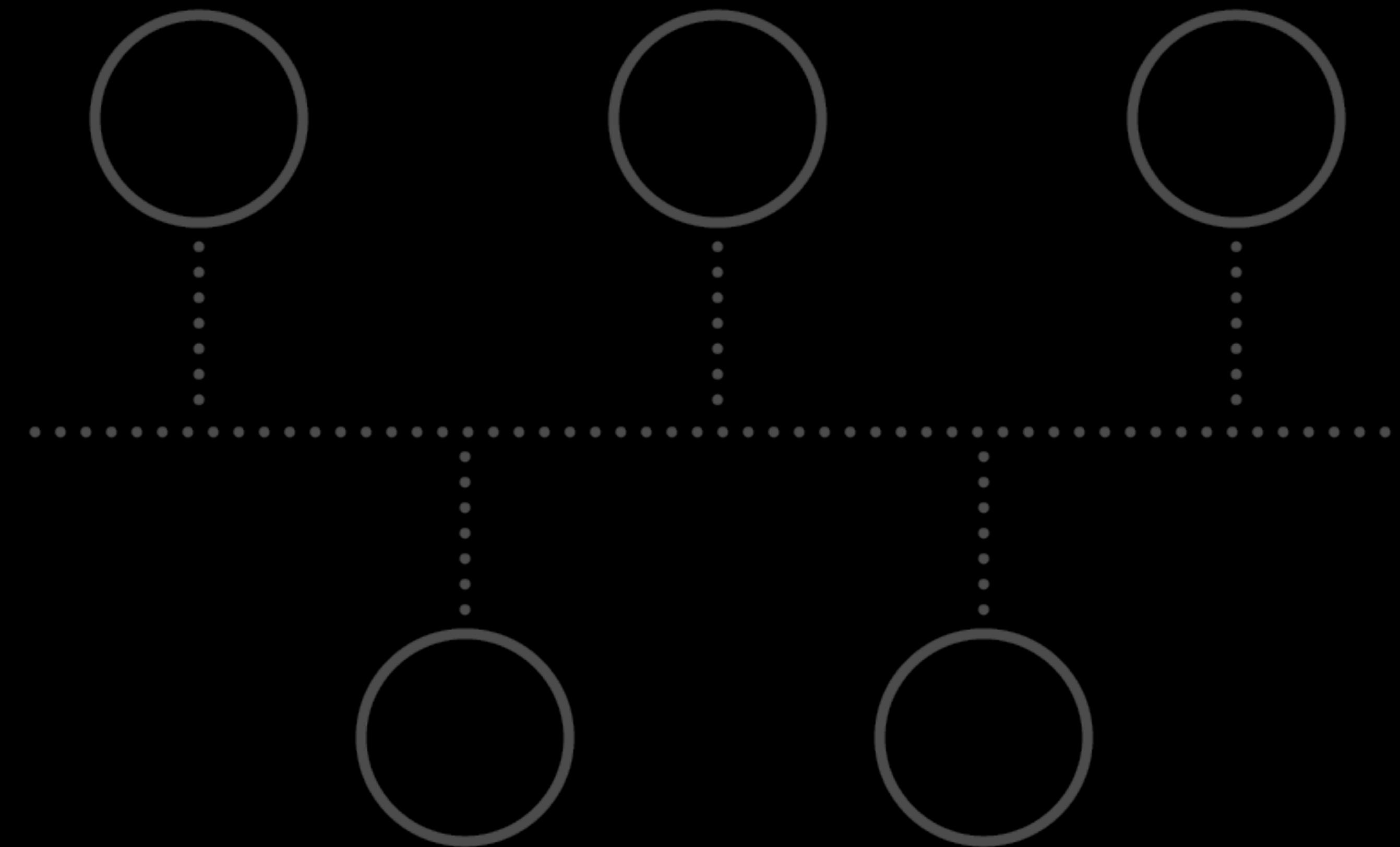
Functional Group	VS	Objectives
Configure and administer security		Manage vSphere storage
Configure advanced networking		Configure software-defined storage
Configure advanced storage		Configure vSphere storage multi-pathing and failover
Administer and manage resources		Perform advanced VMFS and NFS configurations and upgrades
Configure availability solution		Configure software-defined storage

# Comparison: By Item

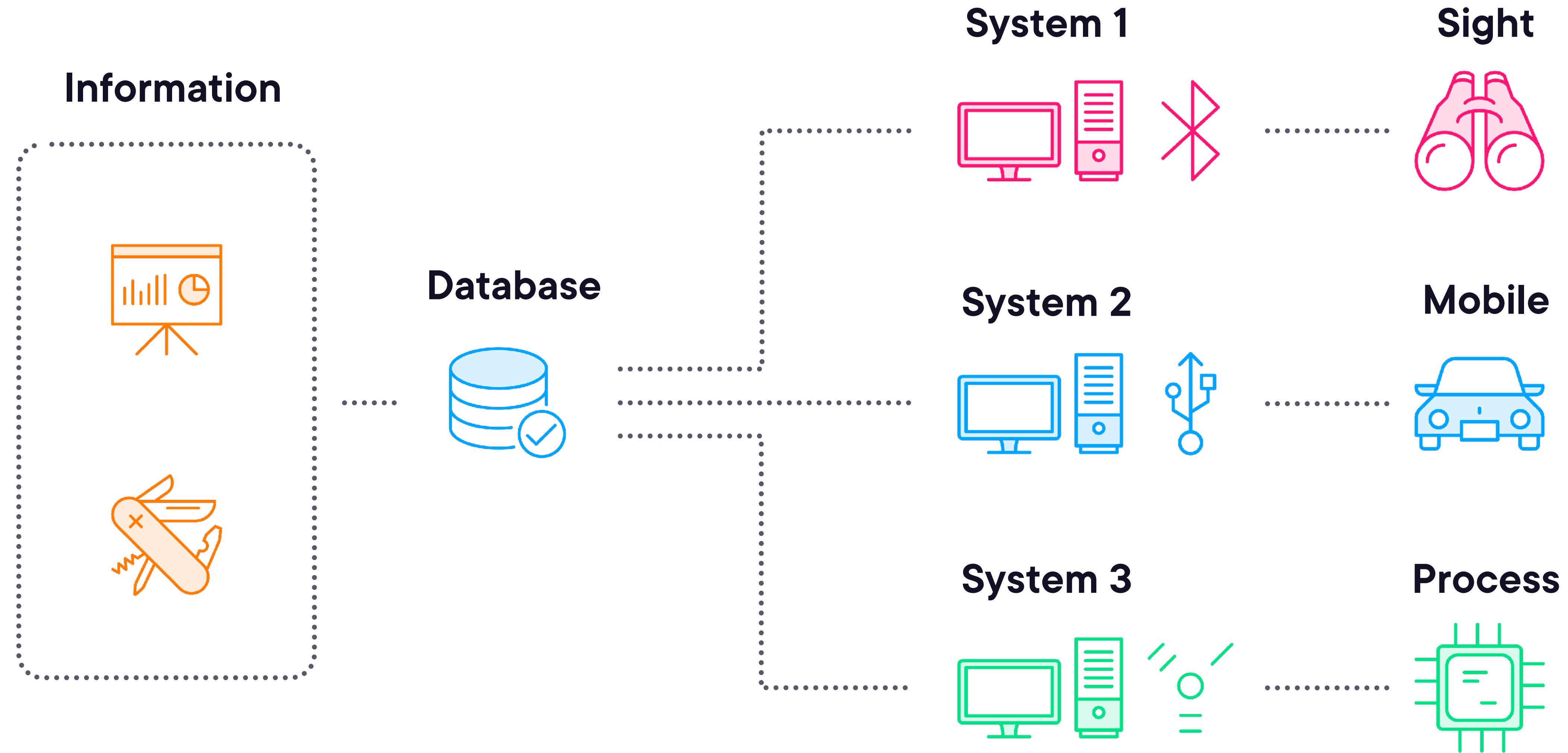
Functional Group	VS	Objectives
Configure and administer security		Manage vSphere storage
Configure advanced networking		Configure software-defined storage
Configure advanced storage		Configure vSphere storage multi-pathing and failover
Administer and manage resources		Perform advanced VMFS and NFS configurations and upgrades
Configure availability solution		Configure software-defined storage

# Diagrams

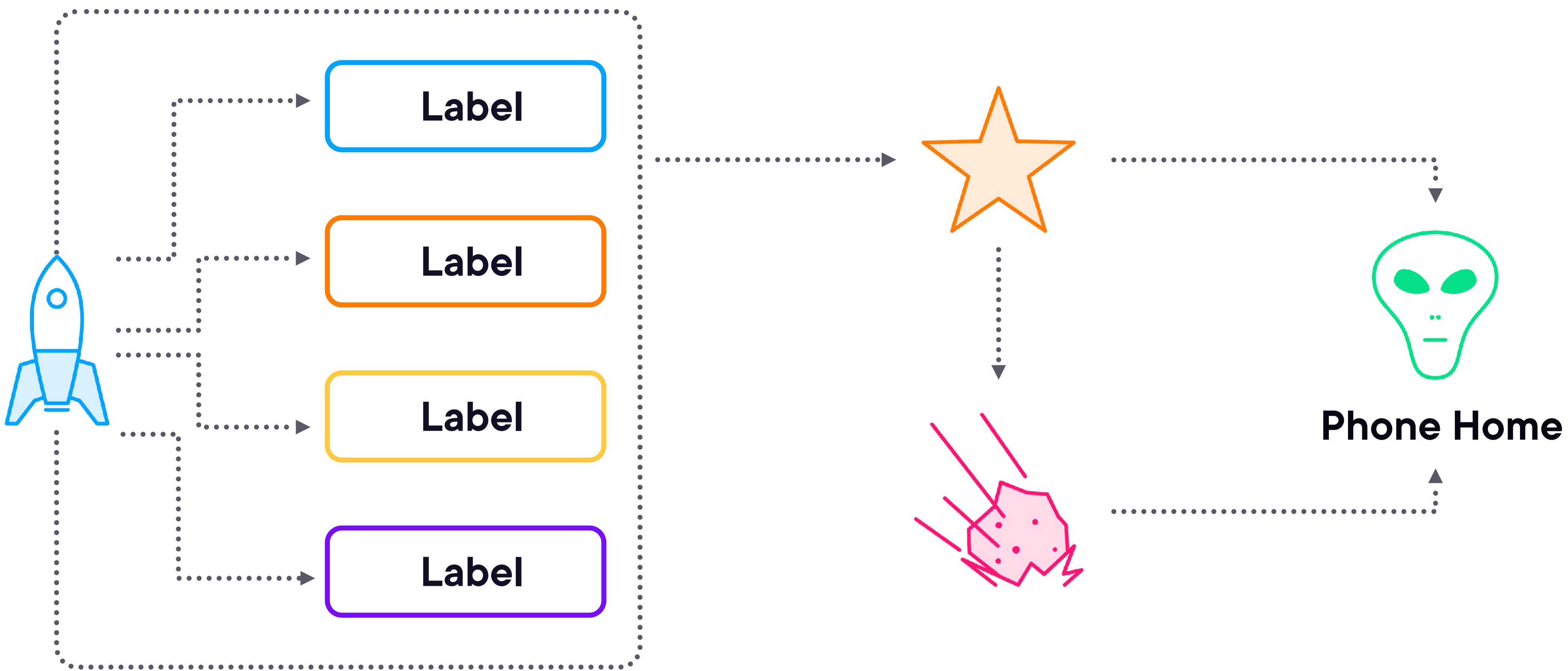
Refer to [Author Kit](#) for additional guidance

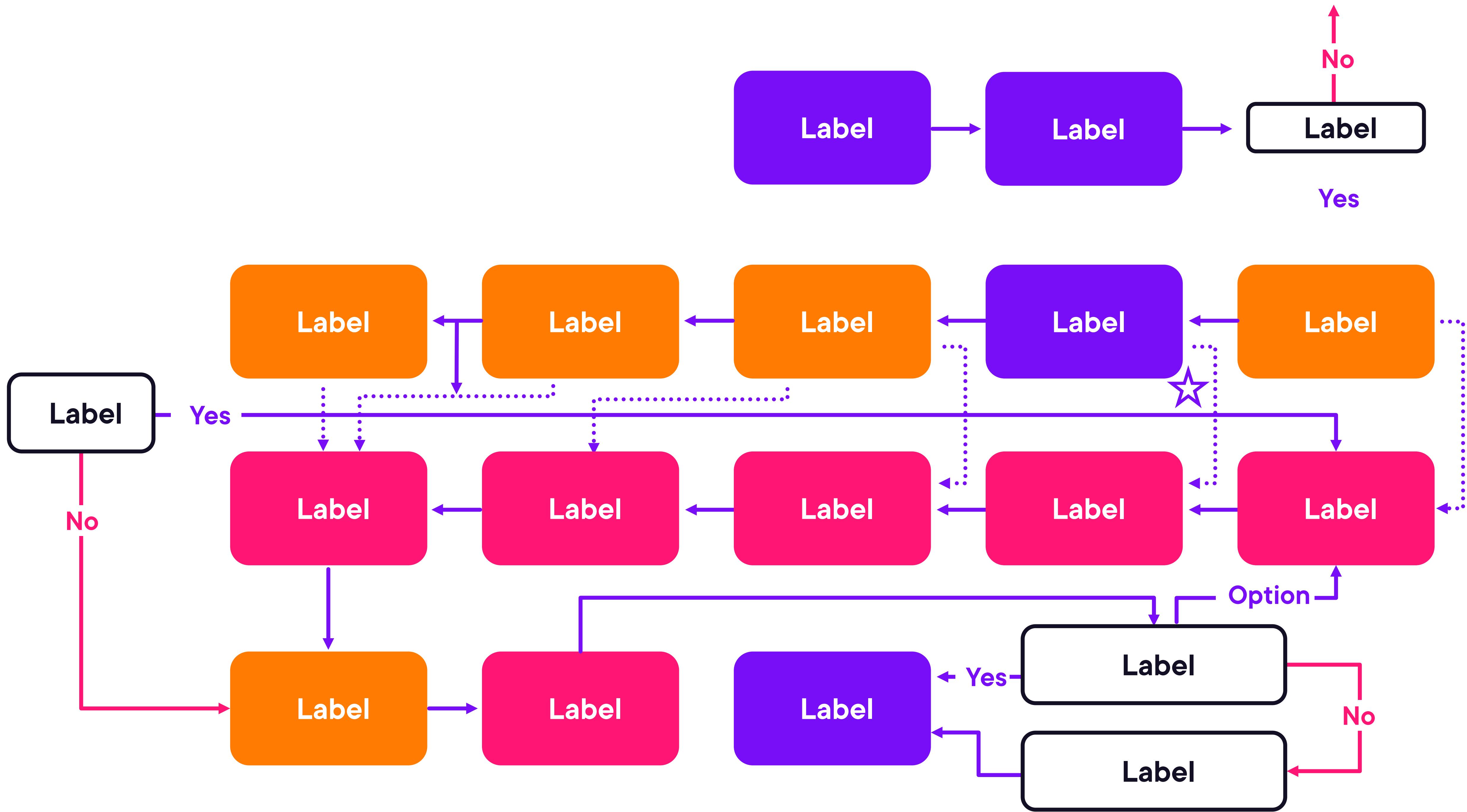


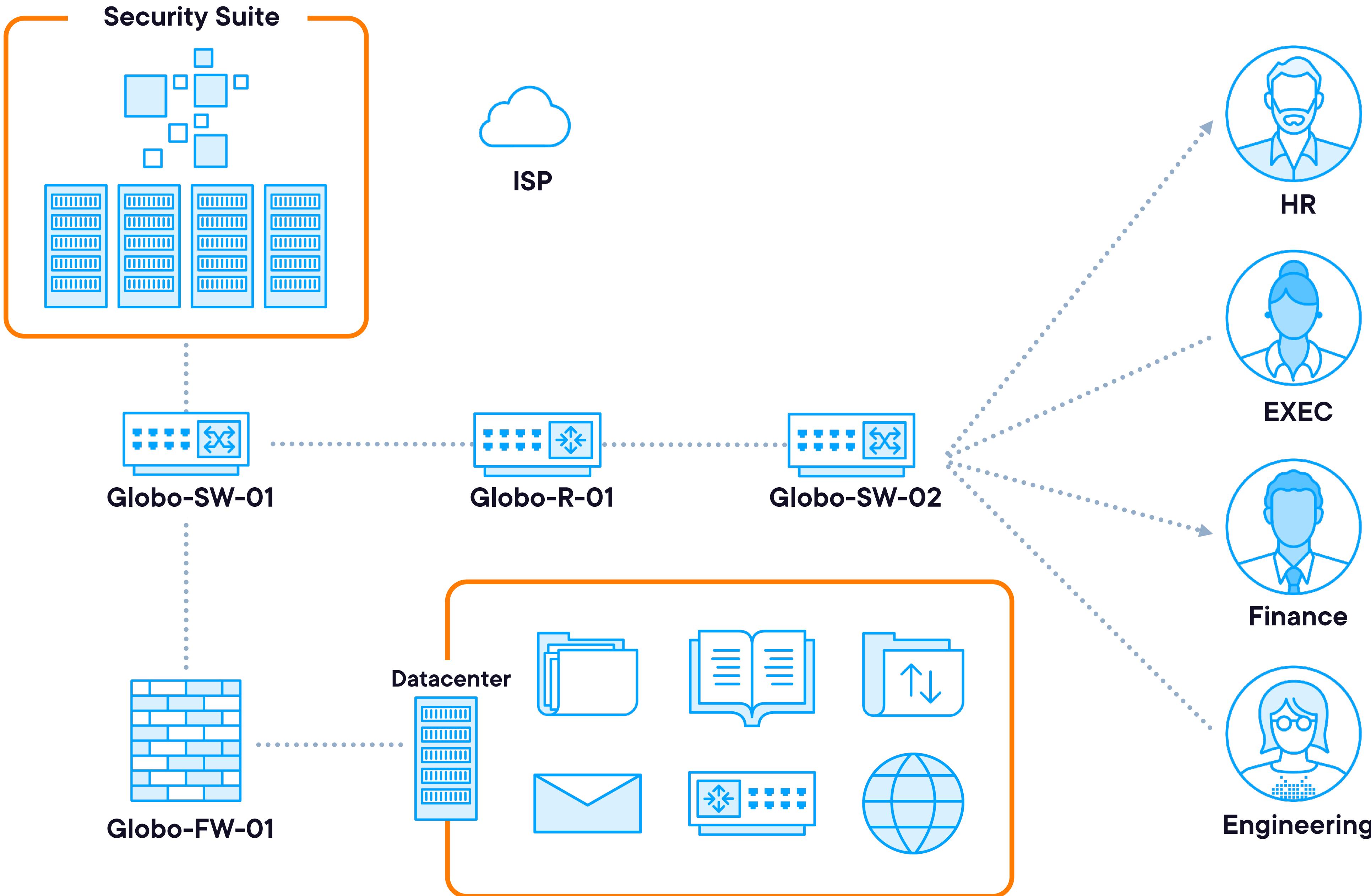
# Basic Diagram



# Basic Diagram

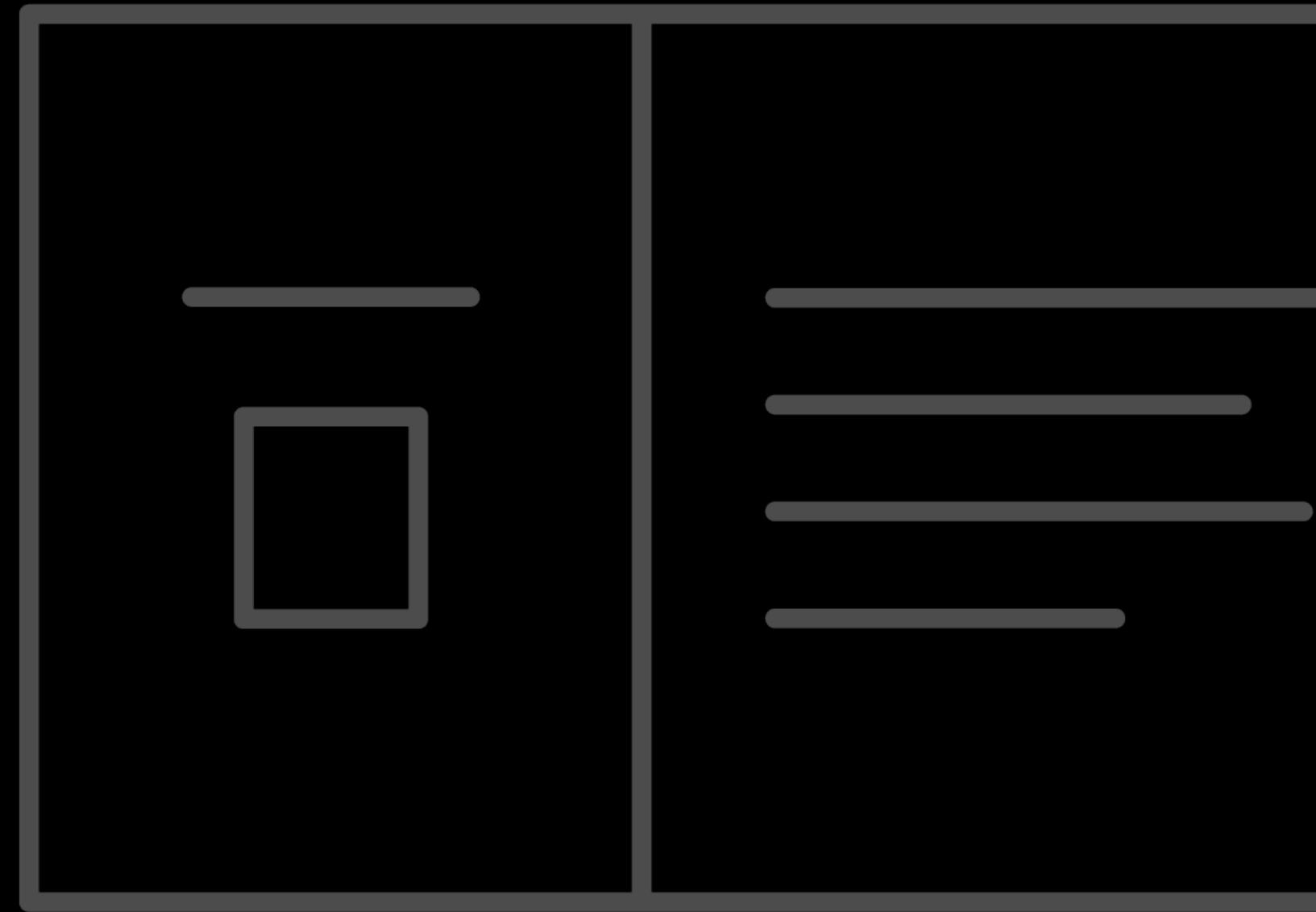
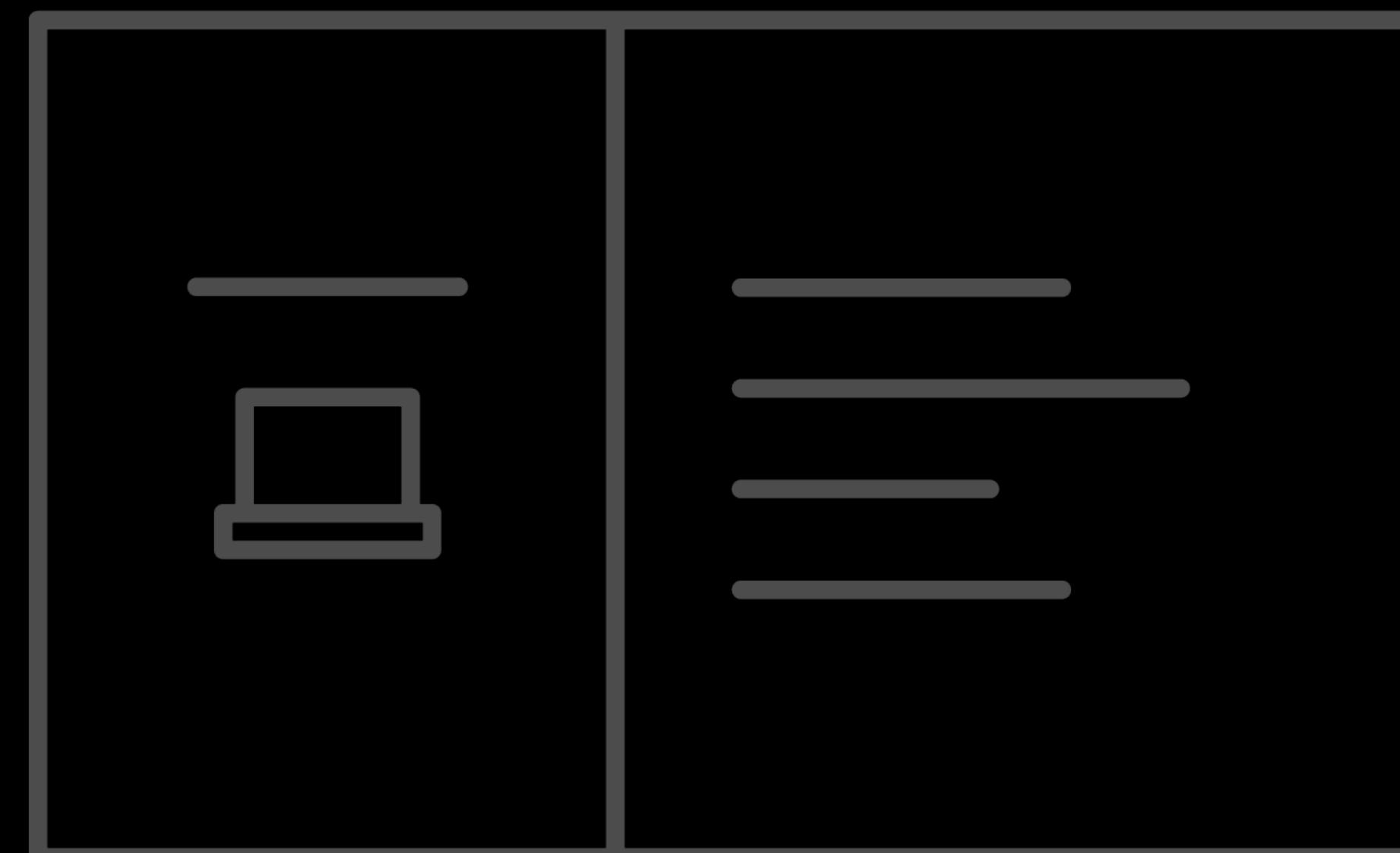






# Slide Transitions

Refer to [Author Kit](#) for additional guidance



# Timeline of Events with Fade Transition

1940s

**McCulloch and Pitts**

Neural network theory

1968

**Ken Thompson**

First in computing

1986

**Henry Spencer**

Regex library

1956

**Stephen Cole Kleene**

Regular events/sets



1973

**Ken Thompson**

First release of grep

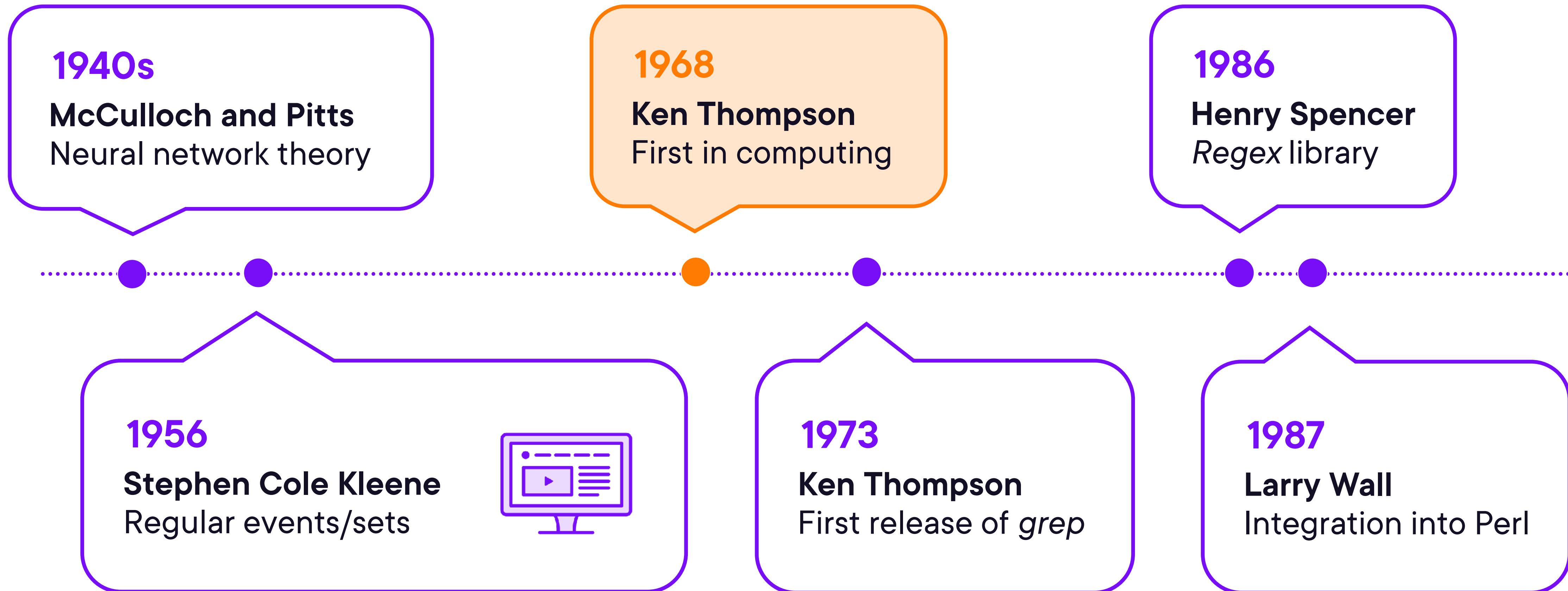
1987

**Larry Wall**

Integration into Perl

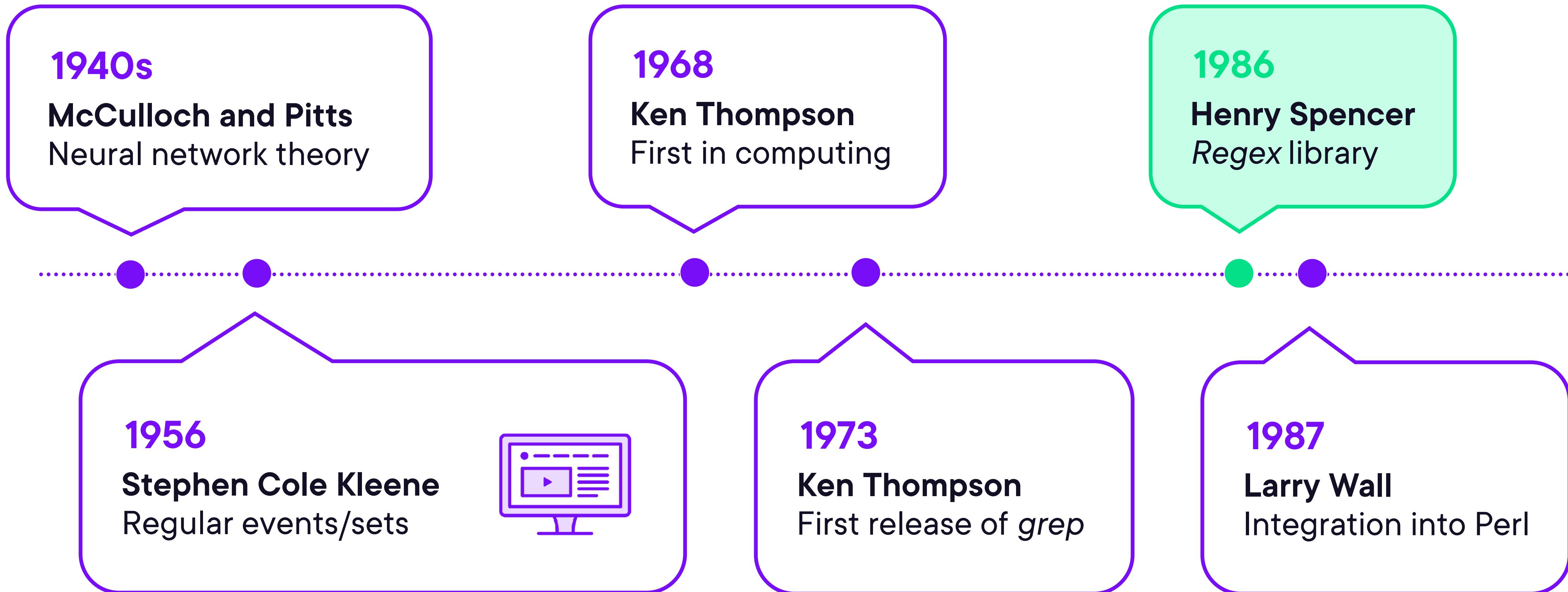
\*View in presentation mode

# Timeline of Events with Fade Transition



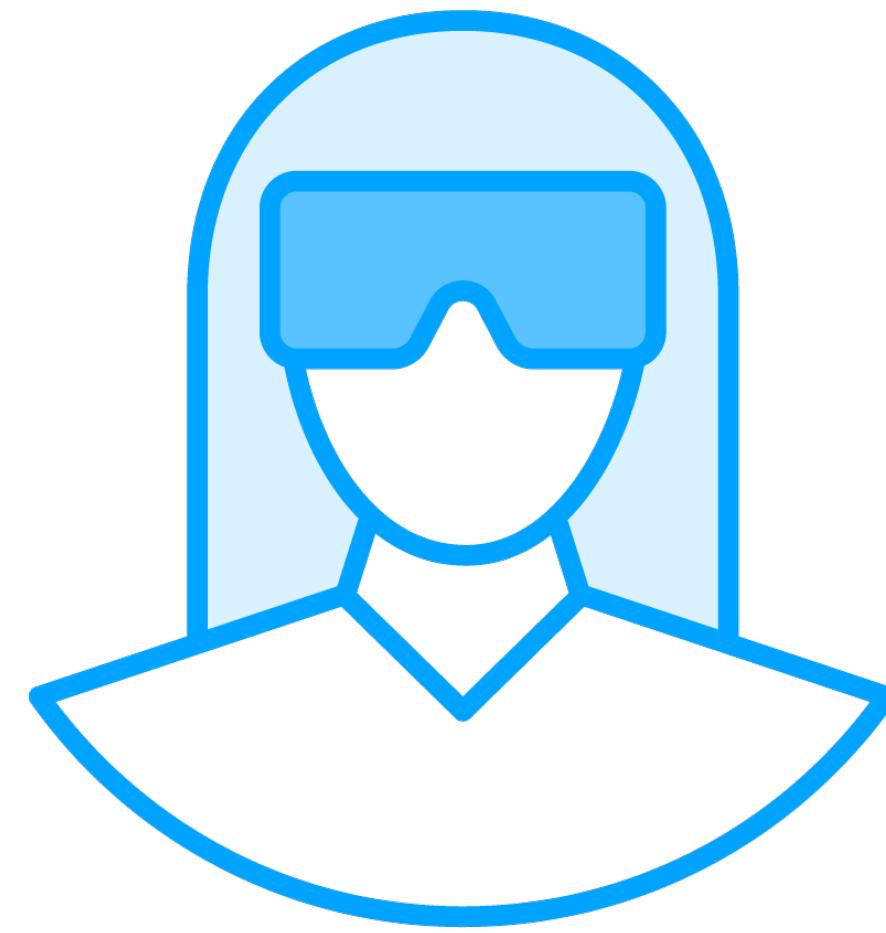
\*View in presentation mode

# Timeline of Events with Fade Transition



\*View in presentation mode

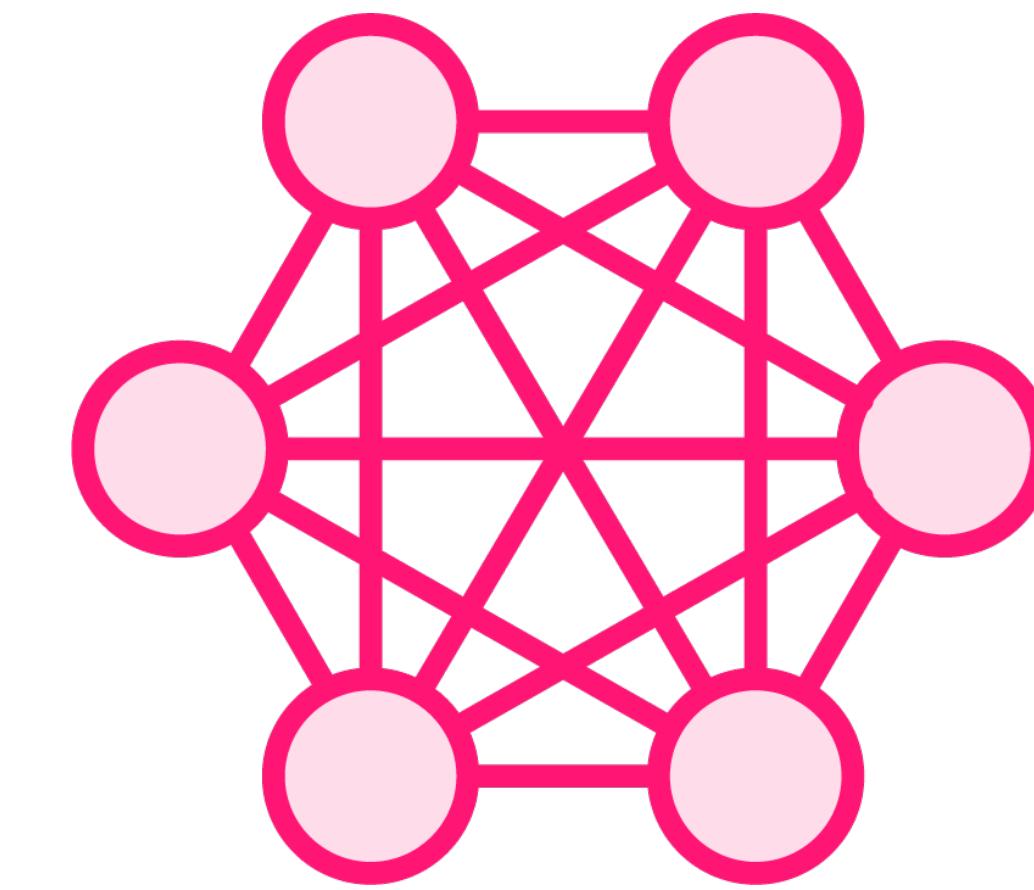
# Cover/Uncover Transition



Some information about  
this graphic goes here



Some information about  
this graphic goes here



Some information about  
this graphic goes here

**Make a statement or  
highlight an idea here  
between the transition.**

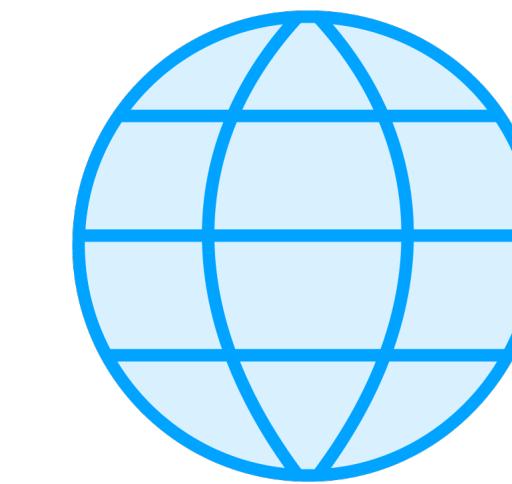
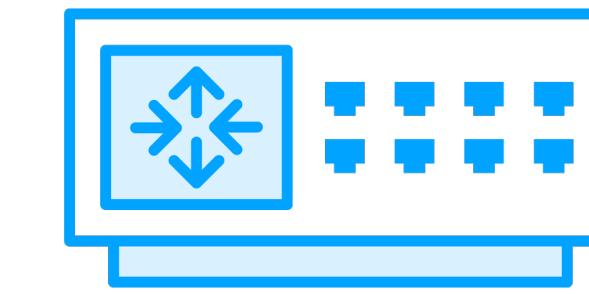
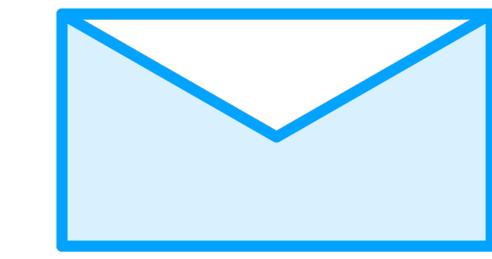
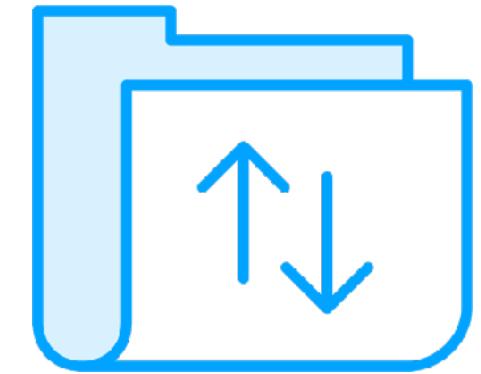
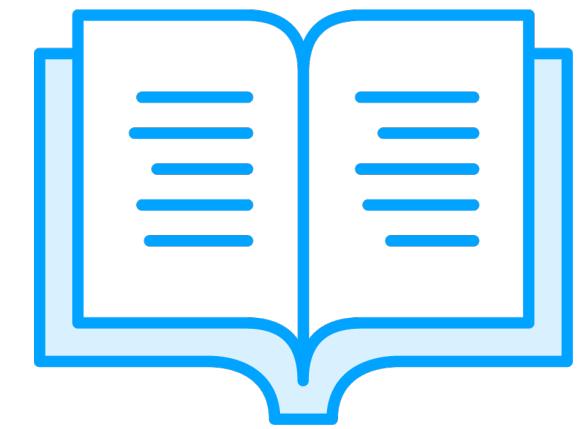
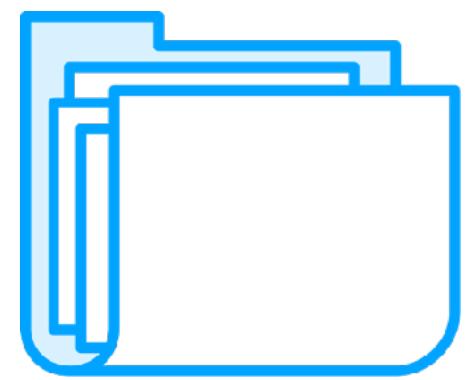
# **Push Transition: Step 1**

**Push transition: Let's have lots of fun.**

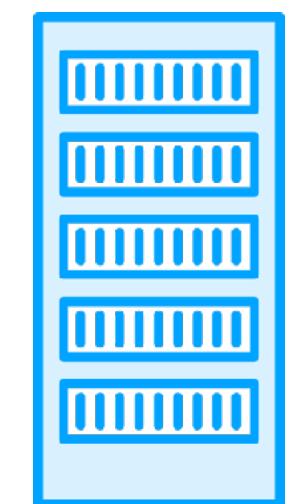
# **Push Transition: Step 2**

**There's so much you can do.**

# Morph Slide Transition



Datacenter



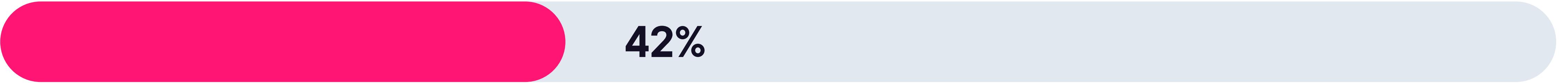
# Morph Slide Transition



# Morph Slide Transition

Q1

**People who love pineapple on pizza**



42%

A horizontal progress bar consisting of a red rounded rectangle on the left and a light gray rounded rectangle on the right. The red section is filled to the 42% mark, which is explicitly labeled in black text.

**People who loathe pineapple on pizza**



56%

A horizontal progress bar consisting of a purple rounded rectangle on the left and a light gray rounded rectangle on the right. The purple section is filled to the 56% mark, which is explicitly labeled in black text.

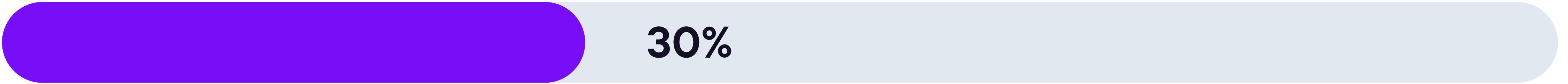
# Morph Slide Transition

Q2

**People who love pineapple on pizza**



**People who loathe pineapple on pizza**



# Other Slides



# Word to Define

**Here is where you put the definition. This is one of the few places where complete sentences are appropriate. Be sure to cite your source.**

# Word to Define

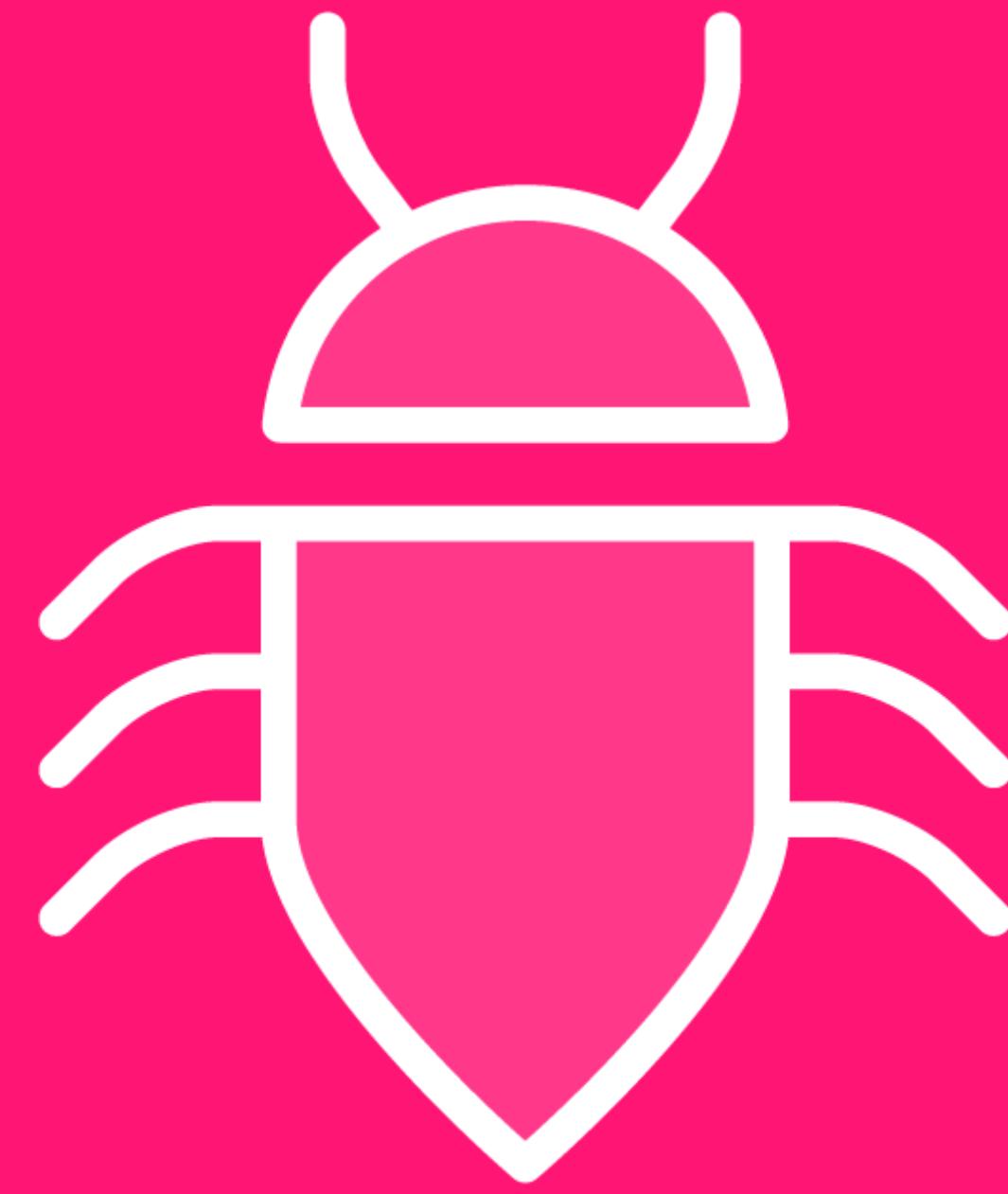
**Here is where you put the definition. This is one of the few places where complete sentences are appropriate. Be sure to cite your source.**

James Baldwin

**“It is true that the more one  
learns the less one knows.”**

Anaïs Nin

“Insert a long or short quote  
right here.”



## Bugs, Bugs, Everywhere!

Add a short bit of description text in this area. This should be a quick intro slide to an idea without a lot of text. Stick to a few sentences.



# Bugs, Bugs, Everywhere!

Add a short bit of description text in this area.  
This should be a quick intro slide to an idea  
without a lot of text. Stick to a few sentences.

**This is a short, important  
statement to bring  
attention to something.**

**This is a short, important  
statement to bring  
attention to something.**

A vibrant hot air balloon with a multi-colored envelope (purple, yellow, red, blue) is the central focus, positioned on the left side of the frame. It is flying over a lush green vineyard with numerous rows of grapevines. In the background, there are rolling hills covered in dense green forests under a vast sky transitioning from blue to warm orange and yellow hues of a setting sun.

You can use full-screen images too