

Exploring and Evaluating Data



Raphael Alampay

Software Developer

@happyalampay | cloudbandsolutions.com | github.com/ralampay

Overview

Overview

- Examining contents of data
- Navigating through your data
- Deriving properties of your data



Reasons to Wrangle Your Data

Filter: Extract
Specific Rows with
Specific Columns

Clean: Pre-process
data for further
analysis

Summarize:
Aggregate data and
derive other
information



Length of the Data Frame with len()

```
In [1]: import pandas as pd
```

```
In [2]: df_yeast = pd.read_csv("yeast.csv", header=None)
```

```
df_yeast
```

Out[2]:

		0	1	2	3	4	5	6	7	8	9
0	ADT1_YEAST	0.58	0.61	0.47	0.13	0.5	0.0	0.48	0.22	MIT	
1	ADT2_YEAST	0.43	0.67	0.48	0.27	0.5	0.0	0.53	0.22	MIT	
2	ADT3_YEAST	0.64	0.62	0.49	0.15	0.5	0.0	0.53	0.22	MIT	
3	AAR2_YEAST	0.58	0.44	0.57	0.13	0.5	0.0	0.54	0.22	NUC	
4	AATM_YEAST	0.42	0.44	0.48	0.54	0.5	0.0	0.48	0.22	MIT	
...
1479	YUR1_YEAST	0.81	0.62	0.43	0.17	0.5	0.0	0.53	0.22	ME2	
1480	ZIP1_YEAST	0.47	0.43	0.61	0.40	0.5	0.0	0.48	0.47	NUC	
1481	ZNRP_YEAST	0.67	0.57	0.36	0.19	0.5	0.0	0.56	0.22	ME2	
1482	ZUO1_YEAST	0.43	0.40	0.60	0.16	0.5	0.0	0.53	0.39	NUC	
1483	G6PD_YEAST	0.65	0.54	0.54	0.13	0.5	0.0	0.53	0.22	CYT	

1484 rows × 10 columns

```
In [3]: len(df_yeast)
```

```
Out[3]: 1484
```

1484 Rows



Examining the n top records with head()

In [5]: `df_yeast.head()`

Out[5]:

	0	1	2	3	4	5	6	7	8	9
0	ADT1_YEAST	0.58	0.61	0.47	0.13	0.5	0.0	0.48	0.22	MIT
1	ADT2_YEAST	0.43	0.67	0.48	0.27	0.5	0.0	0.53	0.22	MIT
2	ADT3_YEAST	0.64	0.62	0.49	0.15	0.5	0.0	0.53	0.22	MIT
3	AAR2_YEAST	0.58	0.44	0.57	0.13	0.5	0.0	0.54	0.22	NUC
4	AATM_YEAST	0.42	0.44	0.48	0.54	0.5	0.0	0.48	0.22	MIT

Default: First 5 Rows

In [6]: `df_yeast.head(10)`

Out[6]:

	0	1	2	3	4	5	6	7	8	9
0	ADT1_YEAST	0.58	0.61	0.47	0.13	0.5	0.0	0.48	0.22	MIT
1	ADT2_YEAST	0.43	0.67	0.48	0.27	0.5	0.0	0.53	0.22	MIT
2	ADT3_YEAST	0.64	0.62	0.49	0.15	0.5	0.0	0.53	0.22	MIT
3	AAR2_YEAST	0.58	0.44	0.57	0.13	0.5	0.0	0.54	0.22	NUC
4	AATM_YEAST	0.42	0.44	0.48	0.54	0.5	0.0	0.48	0.22	MIT
5	AATC_YEAST	0.51	0.40	0.56	0.17	0.5	0.5	0.49	0.22	CYT
6	ABC1_YEAST	0.50	0.54	0.48	0.65	0.5	0.0	0.53	0.22	MIT
7	BAF1_YEAST	0.48	0.45	0.59	0.20	0.5	0.0	0.58	0.34	NUC
8	ABF2_YEAST	0.55	0.50	0.66	0.36	0.5	0.0	0.49	0.22	MIT
9	ABP1_YEAST	0.40	0.39	0.60	0.15	0.5	0.0	0.58	0.30	CYT

First 10 Rows



Examining the n bottom records with tail()

In [6]: `df_yeast.tail()`

Out[6]:

		0	1	2	3	4	5	6	7	8	9
1479	YUR1_YEAST	0.81	0.62	0.43	0.17	0.5	0.0	0.53	0.22	ME2	
1480	ZIP1_YEAST	0.47	0.43	0.61	0.40	0.5	0.0	0.48	0.47	NUC	
1481	ZNRP_YEAST	0.67	0.57	0.36	0.19	0.5	0.0	0.56	0.22	ME2	
1482	ZUO1_YEAST	0.43	0.40	0.60	0.16	0.5	0.0	0.53	0.39	NUC	
1483	G6PD_YEAST	0.65	0.54	0.54	0.13	0.5	0.0	0.53	0.22	CYT	

Default: Last 5 Rows

In [7]: `df_yeast.tail(10)`

Out[7]:

		0	1	2	3	4	5	6	7	8	9
1474	YP52_YEAST	0.48	0.61	0.57	0.17	0.5	0.0	0.45	0.22	CYT	
1475	YP53_YEAST	0.71	0.50	0.50	0.18	0.5	0.0	0.46	0.22	CYT	
1476	YPT7_YEAST	0.61	0.48	0.54	0.25	0.5	0.0	0.50	0.22	CYT	
1477	R29A_YEAST	0.38	0.32	0.64	0.41	0.5	0.0	0.44	0.11	CYT	
1478	R29B_YEAST	0.38	0.40	0.66	0.35	0.5	0.0	0.43	0.11	CYT	
1479	YUR1_YEAST	0.81	0.62	0.43	0.17	0.5	0.0	0.53	0.22	ME2	
1480	ZIP1_YEAST	0.47	0.43	0.61	0.40	0.5	0.0	0.48	0.47	NUC	
1481	ZNRP_YEAST	0.67	0.57	0.36	0.19	0.5	0.0	0.56	0.22	ME2	
1482	ZUO1_YEAST	0.43	0.40	0.60	0.16	0.5	0.0	0.53	0.39	NUC	
1483	G6PD_YEAST	0.65	0.54	0.54	0.13	0.5	0.0	0.53	0.22	CYT	

Last 10 Rows



Filtering Columns by Column Name

Array of Column Names

```
In [8]: df_yeast[[0, 1, 9]]
```

```
Out[8]:
```

		0	1	9
0	ADT1_YEAST	0.58	MIT	
1	ADT2_YEAST	0.43	MIT	
2	ADT3_YEAST	0.64	MIT	
3	AAR2_YEAST	0.58	NUC	
4	AATM_YEAST	0.42	MIT	
...
1479	YUR1_YEAST	0.81	ME2	
1480	ZIP1_YEAST	0.47	NUC	
1481	ZNRP_YEAST	0.67	ME2	
1482	ZUO1_YEAST	0.43	NUC	
1483	G6PD_YEAST	0.65	CYT	

1484 rows × 3 columns



Using iloc to Select Data

Row Range i:n

Column Range i:n

`df_data.iloc[row_indexer, column_indexer]`



1 - Selecting Rows by Index

Start at row 0 until 4th row

In [10]: `df_yeast.iloc[0:4]`

Out[10]:

	0	1	2	3	4	5	6	7	8	9
0	ADT1_YEAST	0.58	0.61	0.47	0.13	0.5	0.0	0.48	0.22	MIT
1	ADT2_YEAST	0.43	0.67	0.48	0.27	0.5	0.0	0.53	0.22	MIT
2	ADT3_YEAST	0.64	0.62	0.49	0.15	0.5	0.0	0.53	0.22	MIT
3	AAR2_YEAST	0.58	0.44	0.57	0.13	0.5	0.0	0.54	0.22	NUC



2 - Selecting Columns by Index

Start at column 0 until 3rd column



In [11]: `df_yeast.iloc[0:4, 0:3]`

Out[11]:

	0	1	2
0	ADT1_YEAST	0.58	0.61
1	ADT2_YEAST	0.43	0.67
2	ADT3_YEAST	0.64	0.62
3	AAR2_YEAST	0.58	0.44



3 - Selecting Rows using a Boolean Indexer

All rows where column 9's value is equal to MIT

In [16]: `df_yeast[df_yeast[9] == 'MIT']`

Out[16]:

		0	1	2	3	4	5	6	7	8	9
0	ADT1_YEAST	0.58	0.61	0.47	0.13	0.5	0.0	0.48	0.22	MIT	
1	ADT2_YEAST	0.43	0.67	0.48	0.27	0.5	0.0	0.53	0.22	MIT	
2	ADT3_YEAST	0.64	0.62	0.49	0.15	0.5	0.0	0.53	0.22	MIT	
4	AATM_YEAST	0.42	0.44	0.48	0.54	0.5	0.0	0.48	0.22	MIT	
6	ABC1_YEAST	0.50	0.54	0.48	0.65	0.5	0.0	0.53	0.22	MIT	
...
1462	ACP_YEAST	0.52	0.53	0.58	0.69	0.5	0.0	0.50	0.22	MIT	
1468	YMC1_YEAST	0.39	0.58	0.47	0.18	0.5	0.0	0.48	0.22	MIT	
1469	YMC2_YEAST	0.38	0.47	0.47	0.18	0.5	0.0	0.44	0.26	MIT	
1470	YME1_YEAST	0.63	0.57	0.50	0.48	0.5	0.0	0.51	0.22	MIT	
1471	RMR3_YEAST	0.51	0.45	0.62	0.25	0.5	0.0	0.59	0.22	MIT	

244 rows × 10 columns



4 - Selecting Rows using a Boolean Indexer

All rows where column 1's value is greater than or equal to 0.5

In [17]: `df_yeast[df_yeast[1] >= 0.5]`

Out[17]:

		0	1	2	3	4	5	6	7	8	9
0	ADT1_YEAST	0.58	0.61	0.47	0.13	0.5	0.0	0.48	0.22	MIT	
2	ADT3_YEAST	0.64	0.62	0.49	0.15	0.5	0.0	0.53	0.22	MIT	
3	AAR2_YEAST	0.58	0.44	0.57	0.13	0.5	0.0	0.54	0.22	NUC	
5	AATC_YEAST	0.51	0.40	0.56	0.17	0.5	0.5	0.49	0.22	CYT	
6	ABC1_YEAST	0.50	0.54	0.48	0.65	0.5	0.0	0.53	0.22	MIT	
...
1475	YP53_YEAST	0.71	0.50	0.50	0.18	0.5	0.0	0.46	0.22	CYT	
1476	YPT7_YEAST	0.61	0.48	0.54	0.25	0.5	0.0	0.50	0.22	CYT	
1479	YUR1_YEAST	0.81	0.62	0.43	0.17	0.5	0.0	0.53	0.22	ME2	
1481	ZNRP_YEAST	0.67	0.57	0.36	0.19	0.5	0.0	0.56	0.22	ME2	
1483	G6PD_YEAST	0.65	0.54	0.54	0.13	0.5	0.0	0.53	0.22	CYT	

691 rows × 10 columns



5 - Replace Values

Assign “Hello World” to column 0 of all rows whose column 9 value is equal to MIT

In [21]: `df_yeast.iloc[df_yeast[9] == 'MIT', 0] = "Hello World"`

`df_yeast`

Out[21]:

	0	1	2	3	4	5	6	7	8	9
0	Hello World	0.58	0.61	0.47	0.13	0.5	0.0	0.48	0.22	MIT
1	Hello World	0.43	0.67	0.48	0.27	0.5	0.0	0.53	0.22	MIT
2	Hello World	0.64	0.62	0.49	0.15	0.5	0.0	0.53	0.22	MIT
3	AAR2_YEAST	0.58	0.44	0.57	0.13	0.5	0.0	0.54	0.22	NUC
4	Hello World	0.42	0.44	0.48	0.54	0.5	0.0	0.48	0.22	MIT
...
1479	YUR1_YEAST	0.81	0.62	0.43	0.17	0.5	0.0	0.53	0.22	ME2
1480	ZIP1_YEAST	0.47	0.43	0.61	0.40	0.5	0.0	0.48	0.47	NUC
1481	ZNRP_YEAST	0.67	0.57	0.36	0.19	0.5	0.0	0.56	0.22	ME2
1482	ZUO1_YEAST	0.43	0.40	0.60	0.16	0.5	0.0	0.53	0.39	NUC
1483	G6PD_YEAST	0.65	0.54	0.54	0.13	0.5	0.0	0.53	0.22	CYT

1484 rows × 10 columns



Describing Your Data

`df_data.describe()`



Describing Your Data

In [22]: `df_yeast.describe()`

Out[22]:

Numeric Columns Only

	1	2	3	4	5	6	7	8
count	1484.000000	1484.000000	1484.000000	1484.000000	1484.000000	1484.000000	1484.000000	1484.000000
mean	0.500121	0.499933	0.500034	0.261186	0.504717	0.007500	0.499885	0.276199
std	0.137299	0.123924	0.086670	0.137098	0.048351	0.075683	0.057797	0.106491
min	0.110000	0.130000	0.210000	0.000000	0.500000	0.000000	0.000000	0.000000
25%	0.410000	0.420000	0.460000	0.170000	0.500000	0.000000	0.480000	0.220000
50%	0.490000	0.490000	0.510000	0.220000	0.500000	0.000000	0.510000	0.220000
75%	0.580000	0.570000	0.550000	0.320000	0.500000	0.000000	0.530000	0.300000
max	1.000000	1.000000	1.000000	1.000000	1.000000	0.830000	0.730000	1.000000

Statistical Properties



What is Correlation?

Look for columns that are redundant

Change of value in one column yields an almost constant change in another

Pairs have either high (closer to 1) or low (closer to -1) correlation scores



Correlation for Numeric Data

`df_data.corr()`



Using the corr() method

In [23]: `df_yeast.corr()`

Out[23]:

	1	2	3	4	5	6	7	8
1	1.000000	0.581631	-0.163951	0.158175	0.064922	0.005597	0.075043	-0.124540
2	0.581631	1.000000	-0.271800	0.140314				0.02984
3	-0.163951	-0.271800	1.000000	0.059668				0.22043
4	0.158175	0.140314	0.059668	1.000000	-0.005931	-0.009040	-0.103591	-0.054797
5	0.064922	0.060823	-0.008083	-0.005931	1.000000	-0.009674	0.043627	0.002829
6	0.005597	0.000392	0.009378	-0.009040	-0.009674	1.000000	0.020900	-0.035659
7	0.075043	0.088759	-0.185805	-0.103591	0.043627	0.020900	1.000000	0.089690
8	-0.124540	-0.102984	-0.022043	-0.054797	0.002829	-0.035659	0.089690	1.000000

All values are perfectly correlated (1)



Demo

Data Wrangling

- Read a CSV file and take a quick peek
- Use various `iloc` approaches
- Derive properties of our data



Summary

Summary

- Working around your data frame
- Examining high level information
- Extracting information for further analysis

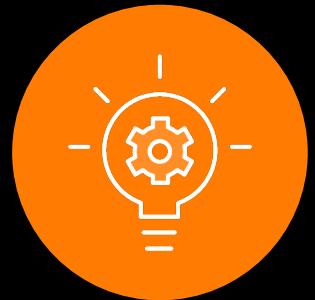


Author Course Template

2022.10.b



View in Slide Show mode the first time you run through this deck.



Slides with the **light bulb icon** are guidelines only.
Please do not use them in your course.





Hello!



We've packed this slide template with options you can use to tell compelling stories to engage learners.

You'll notice that most of the slides have a white background, but some (like this one) have a black background. You'll find tips, tricks, and insights on the black slides, and you can use the white slides as templates or inspiration for your own content slides.

If you have questions, feedback, or suggestions for the deck, share them with your video content producer or post them in [#ps_production-updates](#) in Author Slack.

Happy authoring!

Content Production Services Design Team





More Resources

- Refer to the [Creating Slides page](#) for more guidance on using this deck.
- Use our icon library as your first source for images. Either open the searchable [Icon Library page](#) on Author Kit or download the latest version from the [Downloads page](#).
- Use the [Title Case Converter](#) to meet our standards for capitalizing course names, module titles, clip titles, and slide titles.





Committing to Pluralsight Standards

Key Standards:

- Use only PS TT Commons font for content slides and Roboto Mono font for code or terminal output slides.
- Apply [title case](#) to all course, module, clip, and slide titles.
- Use only the [Pluralsight color palette](#).
- Ensure all images are high-quality and copyright-safe.
- Use animations and slide transitions only if they call out important information or help tell a more compelling story.

More information: [Slide Standards and Guidelines page](#)





Pluralsight Watermark

All Pluralsight video content is required to have a Pluralsight watermark. This watermark can be seen in the lower right-hand corner (if you are in editor mode, you can see it in the lower right-hand corner of this slide).

The watermark is applied to your final video files when they are run through the encoding processes. This ensures that the mark appears over your slides as well as any demo footage in your course.

The mark you see here in PowerPoint is only for reference in the editor mode so that you do not put any content there. When viewing your slides in presentation mode (and ultimately recording them), the mark will not appear.





Accessibility

It's important to make sure our slides are accessible to as many people as possible.



Throughout the slide deck, look for this symbol in the slide margins that indicates accessibility notes.

See what they look like right below this slide





Pluralsight Color Palette: Primary Colors

Transform Pink is our main primary color and should be more prominent than any of the secondary colors. **Inky Blue** is our other primary color and is used as our dark mode background and instead of black for body copy.

Transform Pink

Hex #FF1675

RGB 255,22,117

Inky Blue

Hex #130F25

RGB 19,15,37





Pluralsight Color Palette: Secondary Colors

Secondary colors can be used as accent colors for emphasis.

Hex #00A3FF
RGB 0,163,255

Hex #770EF7
RGB 119,14,247

Hex #FFC942
RGB 255,201,66

Hex #FF7B01
RGB 255,123,1

Hex #02E088
RGB 2,224,136





Pluralsight Color Palette: Gray Alternative

These colors can be used as an alternative to gray or as lighter versions of Future Blue.

Hex #1B1834
RGB 27,24,52

Hex #585FA2
RGB 88,95,162

Hex #EBEFF5
RGB 235,239,245



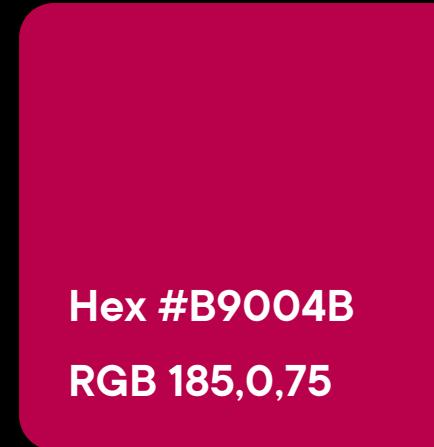


Pluralsight Color Palette: YES vs. NO

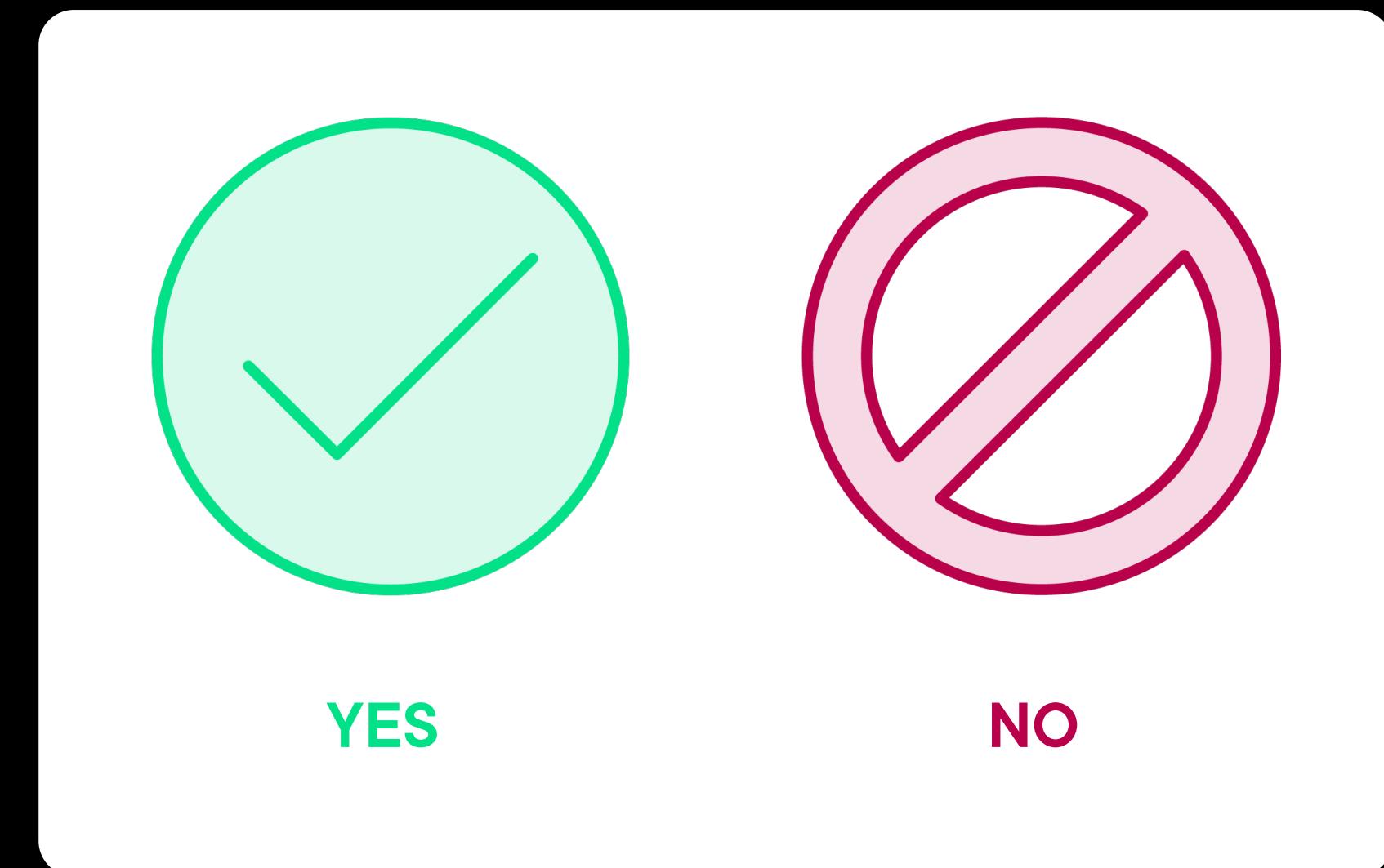
Should the situation arise where you need to include YES vs. NO (go/stop) imagery, use our green and darkest shade of primary pink.



Hex #02E088
RGB 2,224,136



Hex #B9004B
RGB 185,0,75





Pluralsight Color Palette: Caution

Should the situation arise where you need to represent caution or a warning, use the yellow from our secondary color palette.





Rounded Corners

All rectangles should have rounded corners.

When selecting a shape, choose the “rounded rectangle”.

By default, the edges will become more rounded as the shape gets larger.

Decrease the corner radius by clicking and dragging the small yellow square that appears when you click on the rectangle.

Make sure the corner radius is consistent per slide. It should not be too large.

Correct

Incorrect





PS TT Commons & Roboto Mono Fonts

If these two columns match, PS TT Commons and Roboto Mono are correctly installed.

PS TT Commons Light

PS TT Commons Regular

PS TT Commons Demibold

Roboto Mono

PS TT Commons Light

PS TT Commons Regular

PS TT Commons Demibold

Roboto Mono





Font Sizes

As mentioned, the main font you will be using is PS TT Commons. Use Robot Mono for code or terminal output slides.

- **Body copy:** for maximum legibility, do not use less than a 24-point font size
 - 34-36 is standard, using PS TT Commons Demi Bold.
- You may use a font size less than 24 pt on diagrams when needed as long as legibility is not lost. It is not recommended to go below 18 pt.
- **Slide title:** use PS TT Commons Bold at 48-point font size. The title can be more than one line if needed.





Table of Contents

Template Types

- [Title Slides](#)
- [Overview/Summary and Demo Layouts](#)
- [Text Chunking](#)
- [Image Chunking](#)
- [Bullet Lists](#)
- [Code](#)
- [Citations](#)
- [Comparison Slide](#)
- [Diagrams](#)
- [Slide Transitions](#)
- [Other Slides](#)



Title Slides





Using Title Slides

These templated title slides are **required** at the beginning of every module. Please do not alter or use any of these slides for anything other than their intended purposes.

Module TWO only (your first content module):

- Place the course title in the main space. ➔
- Place the module two title underneath. ➔

The template features a white background with a subtle geometric pattern of overlapping circles in the background. In the center, the text "Title of This Course in Title Case" is displayed in a large, bold, black font. Below it, "Module Two Title in Title Case" is shown in a smaller, regular black font. On the left side, there is a circular profile picture of a person with dark hair and glasses. To the right of the profile picture, the text "Author Name" is in bold, followed by "Author Title in Title Case" and a small URL "@socialmedia | www.authorsite.com". On the right side, there is a decorative graphic element consisting of overlapping pink and white shapes. A small play button icon is located in the bottom right corner of the slide area.

Module THREE and higher:

- Place the module title in the main space. ➔

The template features a white background with a subtle geometric pattern of overlapping circles in the background. In the center, the text "Title of This Module in Title Case" is displayed in a large, bold, black font. On the left side, there is a circular profile picture of a person with dark hair and glasses. To the right of the profile picture, the text "Author Name" is in bold, followed by "Author Title in Title Case" and a small URL "@socialmedia | www.authorsite.com". On the right side, there is a decorative graphic element consisting of overlapping pink and white shapes. A small play button icon is located in the bottom right corner of the slide area.





Using Section Header Slides

Section slides are optional. Please do not alter or use any of these slides for anything other than their intended purposes.

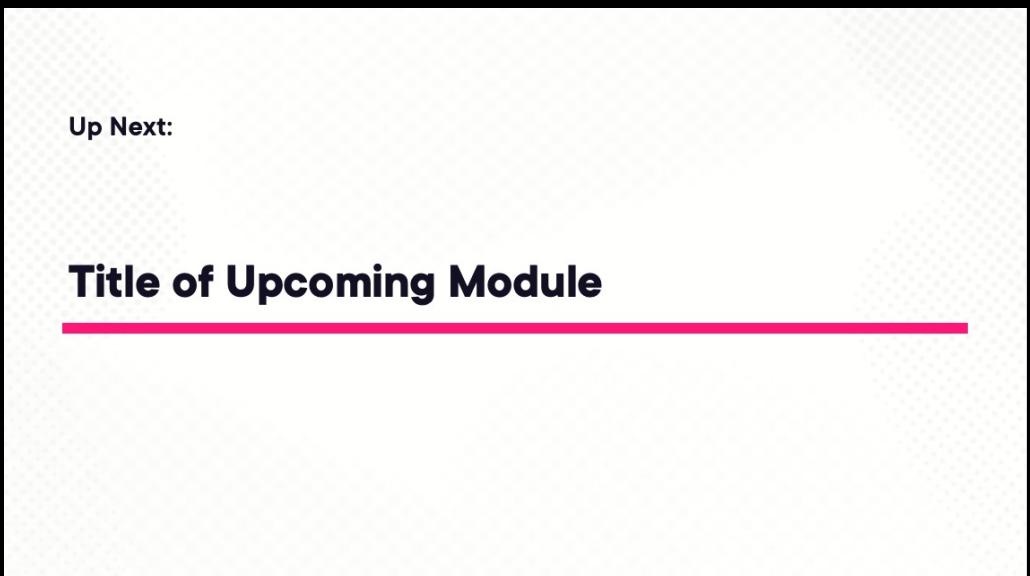
SECTION HEADER slide:

- Use this slide only at the beginning of a clip ➔
(optional - not required).



UP NEXT slide:

- Use this slide only at the end of a module ➔
(optional - not required).





Replacing an Image

How to replace your image:

- Right-click the image you wish to replace.
- Right-click > Change Picture > From a File
- To create a black and white image, lower the color saturation to 0%.
- Color saturation can be found in the Picture Format Pane, under the Picture tab, then Picture Color.



Title of This Course in Title Case

Module Two Title in Title Case



Author Name

Author Title in Title Case

@socialmedia | www.authorsite.com

Title of This Module in Title Case



Author Name

Author Title in Title Case

@socialmedia | www.authorsite.com



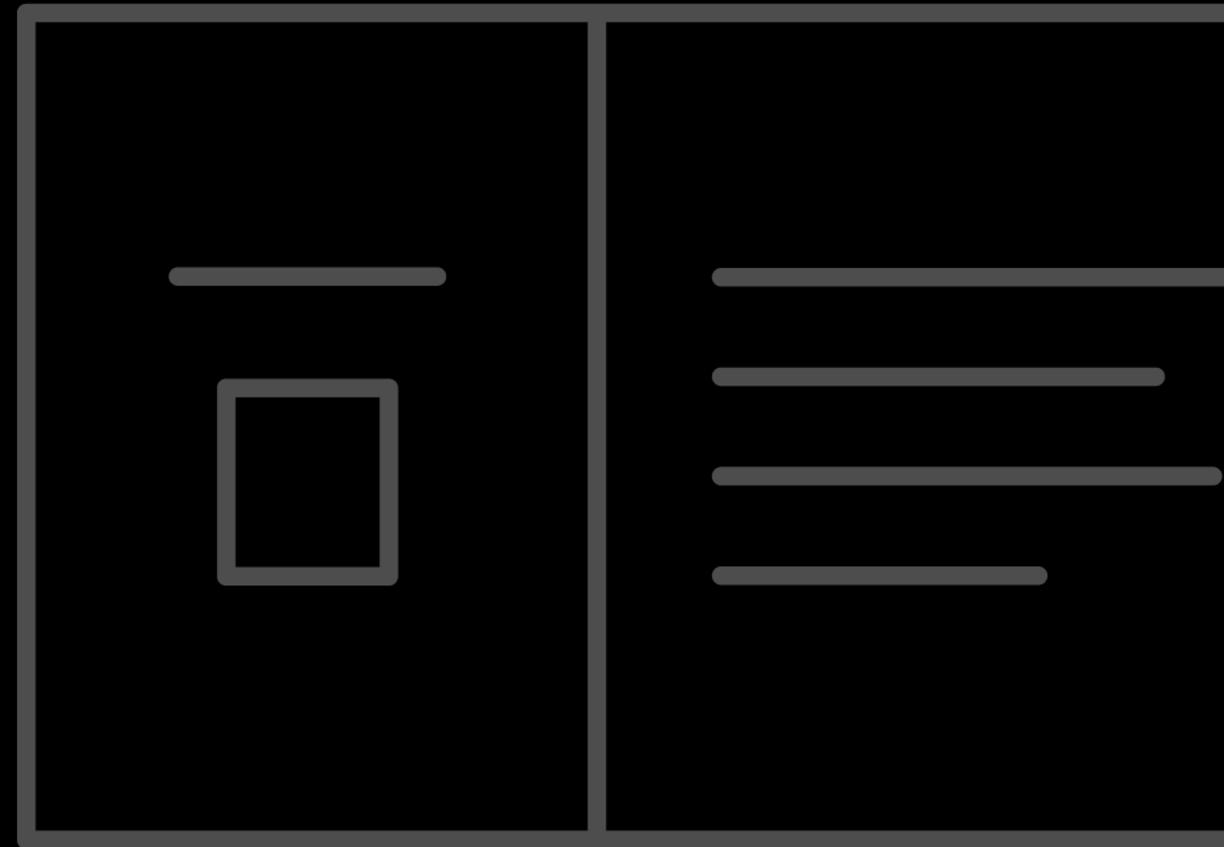
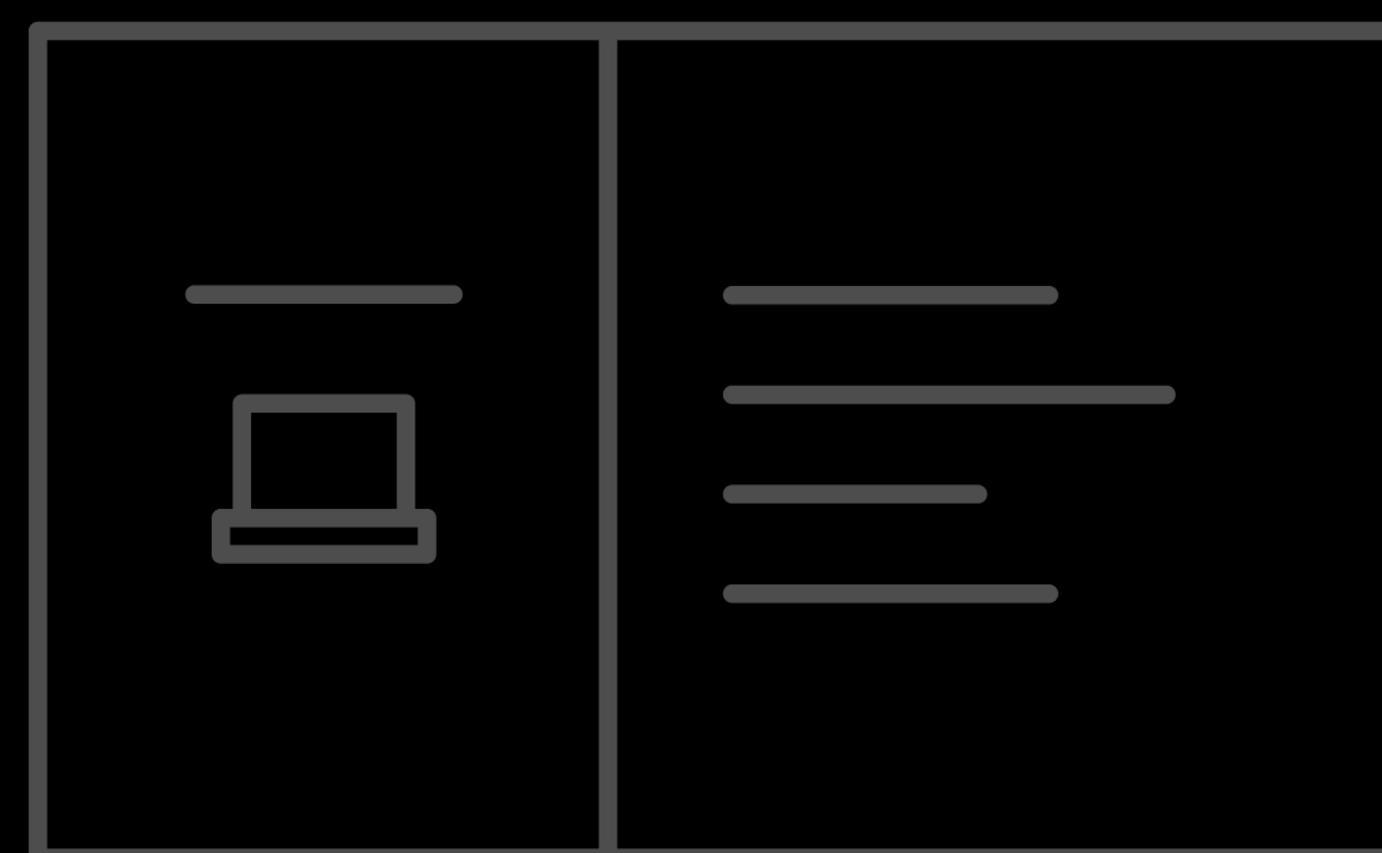
Add Section Header in Title Case

Up Next:

Title of Upcoming Module



Overview/Summary and Demo Layouts



Overview/ Summary

Use this layout to introduce or summarize

Overview

- Explain what's in this section for learners
- Layout a problem that will be solved

Summary

- Revisit problem and solution
- Provide practical takeaways



Demo

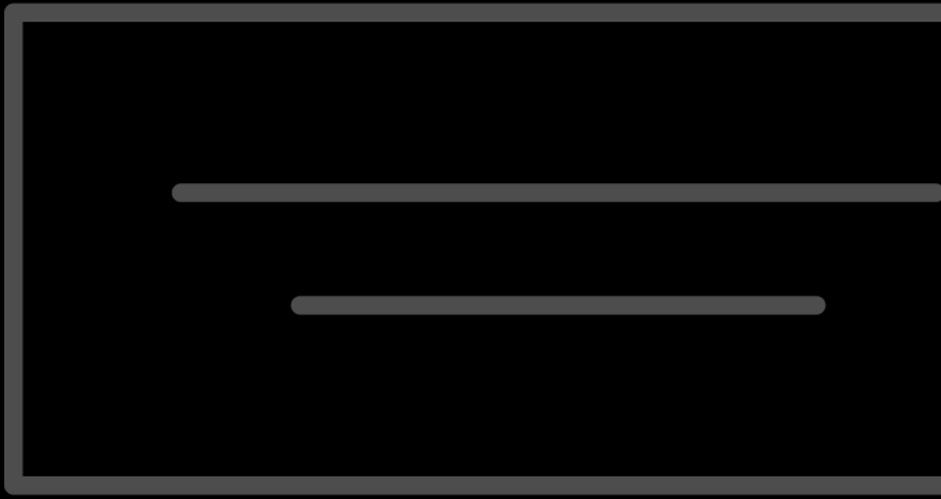
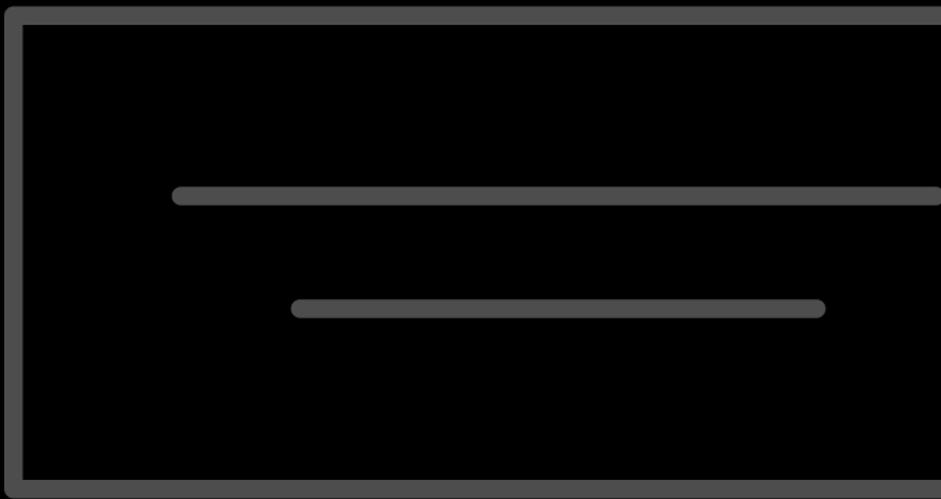
Use this layout to introduce your demo

Set the stage for this step

- Why we do it
- How we do it



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

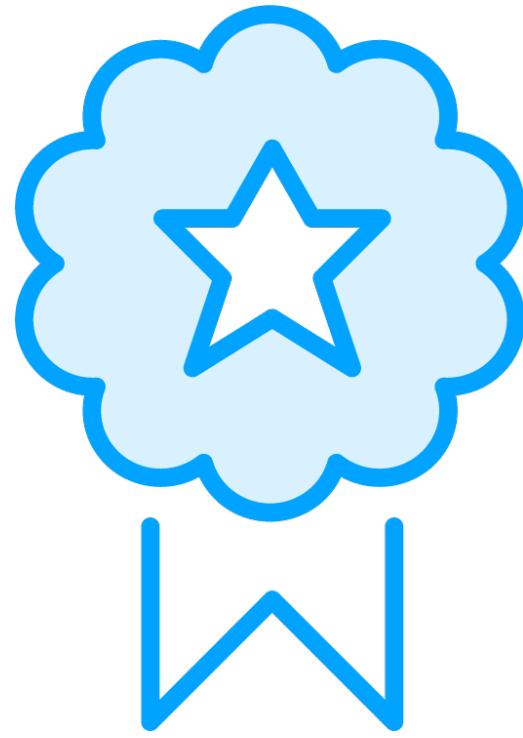
Thing 6



Image Chunking

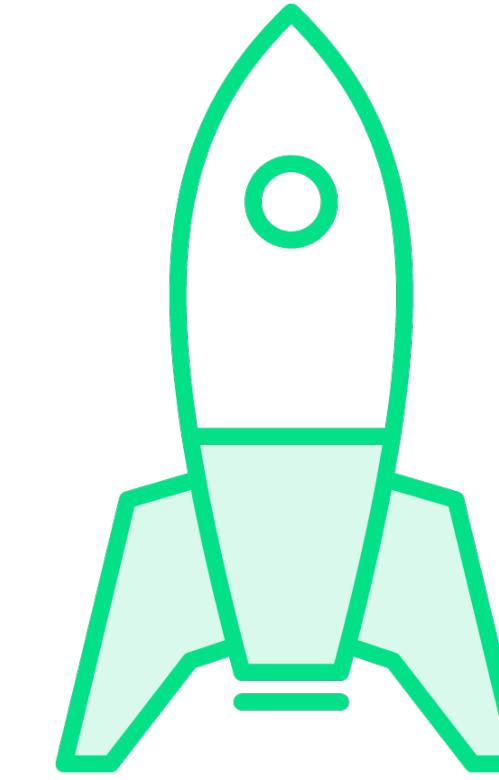


Icon or Image Chunking: Two Items with Headers



Informative Title

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

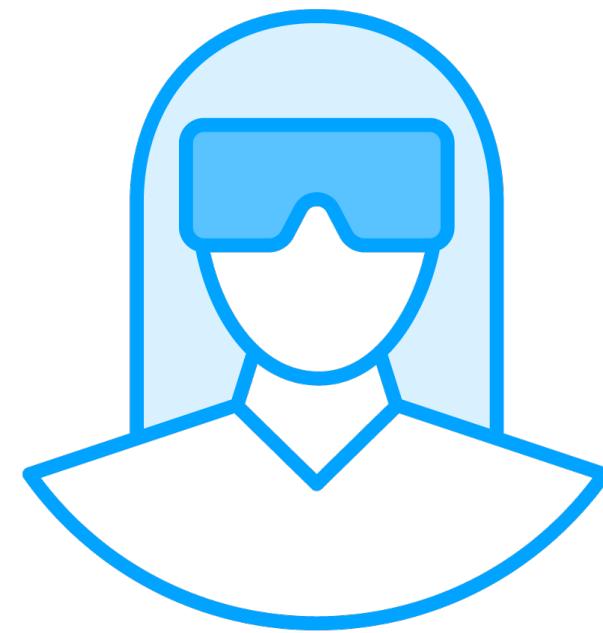


Informative Title

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



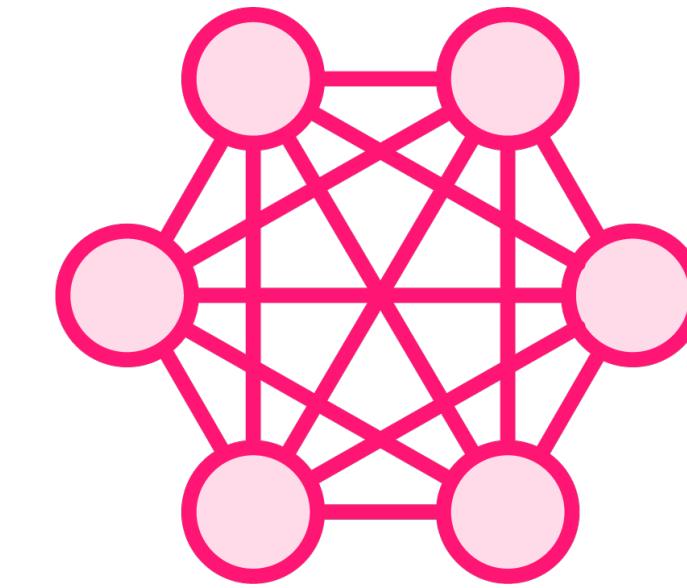
Icon or Image Chunking: Three Items



**Some information
about this graphic
goes here**



**Some information
about this graphic
goes here**



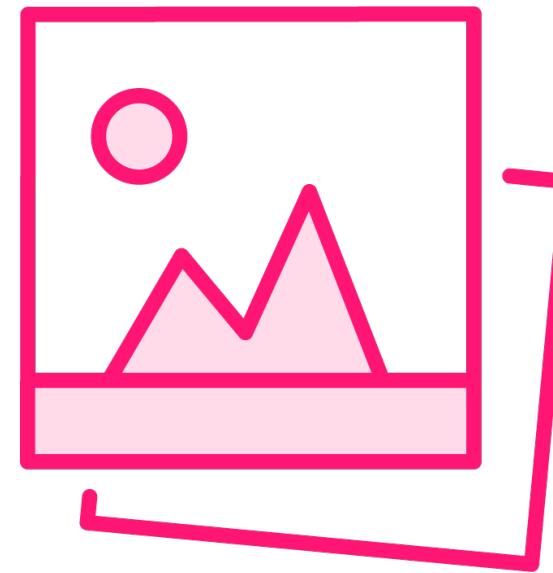
**Some information
about this graphic
goes here**



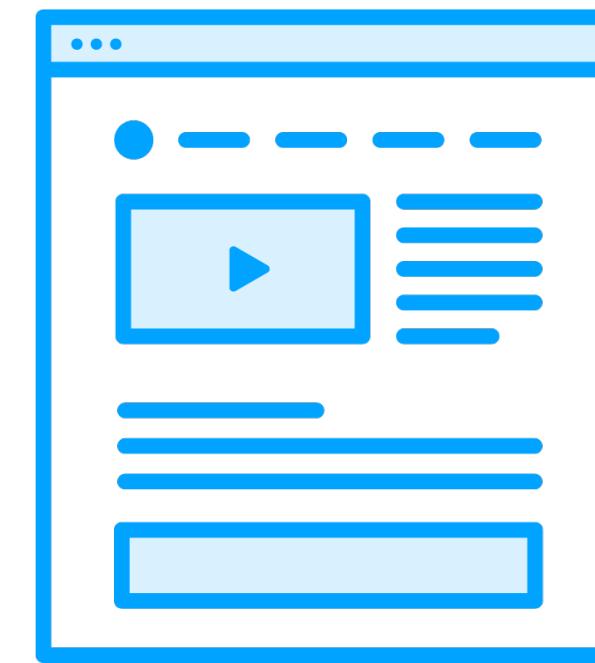
Icon or Image Chunking: Four Items



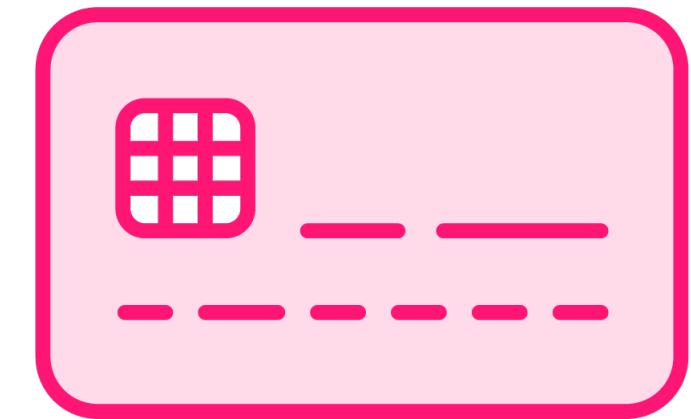
Some info goes here; three lines or fewer is best



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



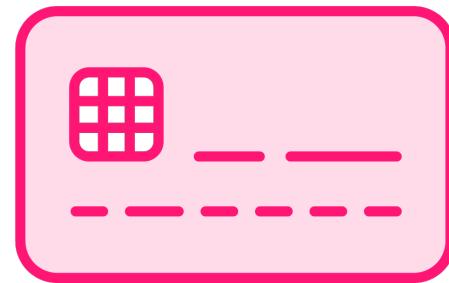
Icon Only Image Chunking: Six Items



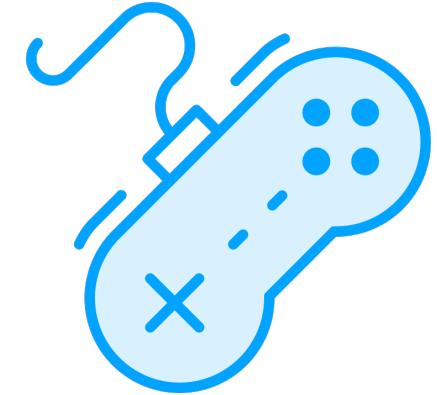
Data transfer



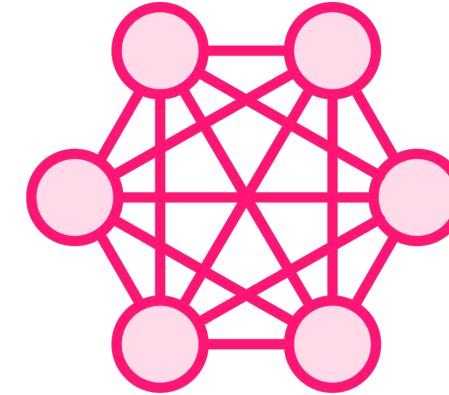
Email



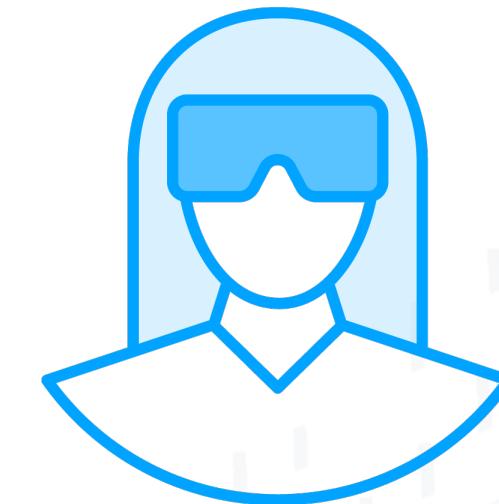
ID card



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

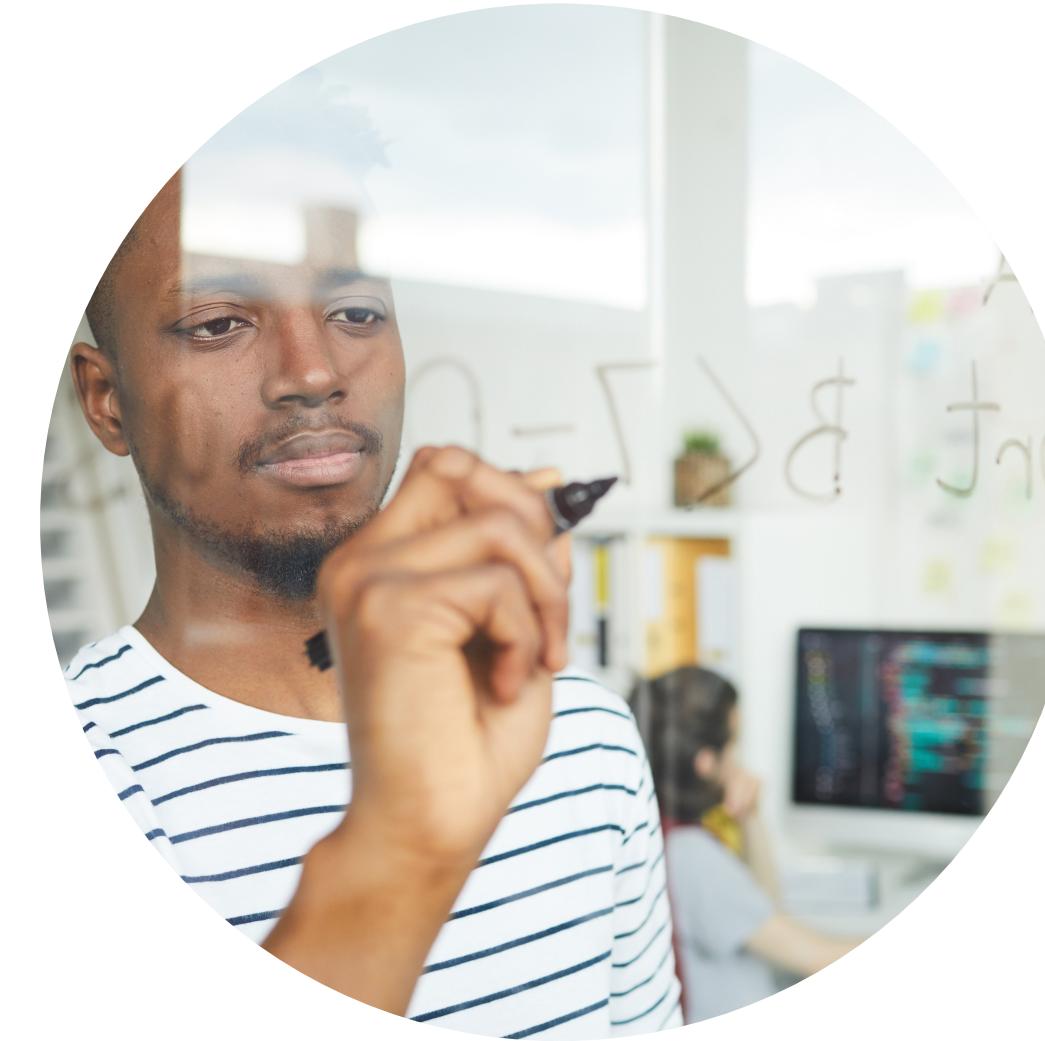
Some information about this graphic goes here and four lines or fewer is best



Circle Icon or Image Chunking: Two Items



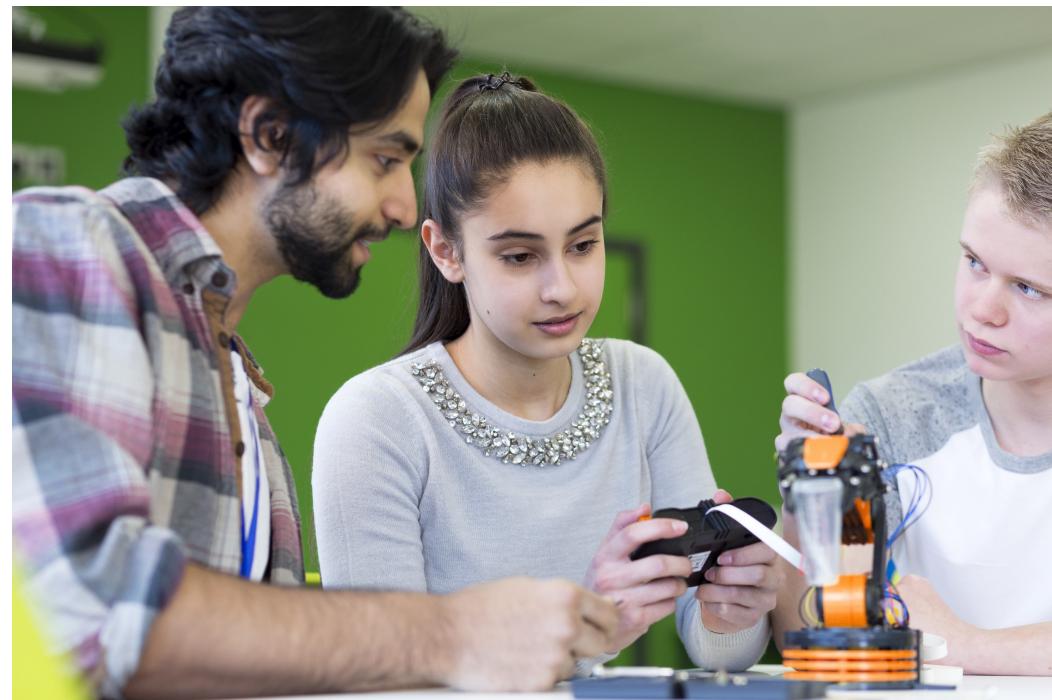
Partner pairing



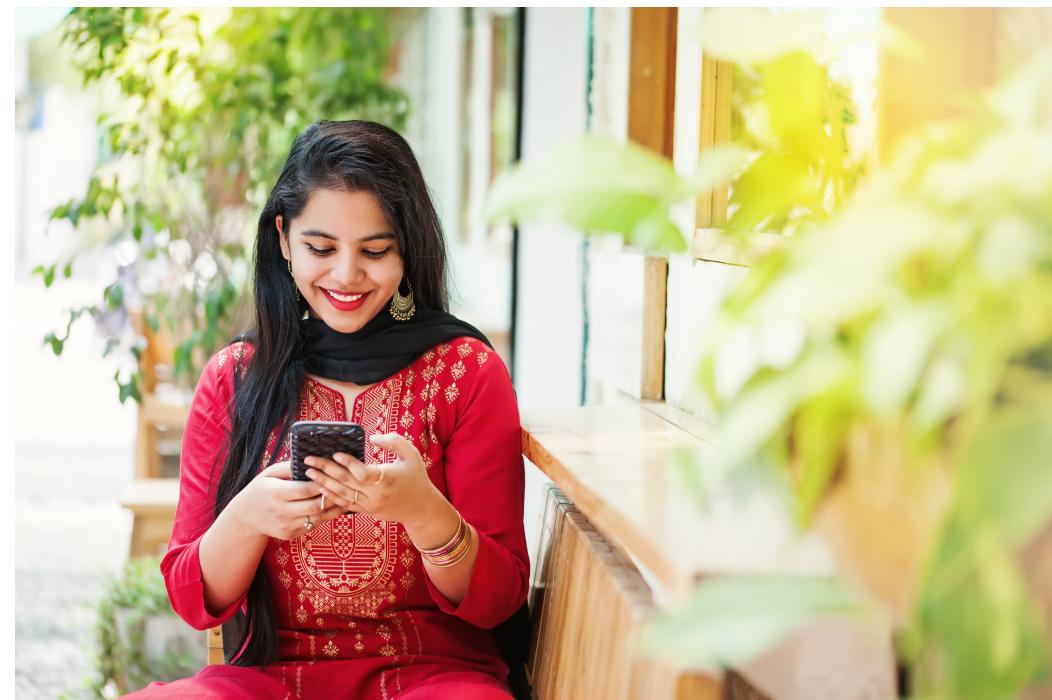
Brainstorming ideas



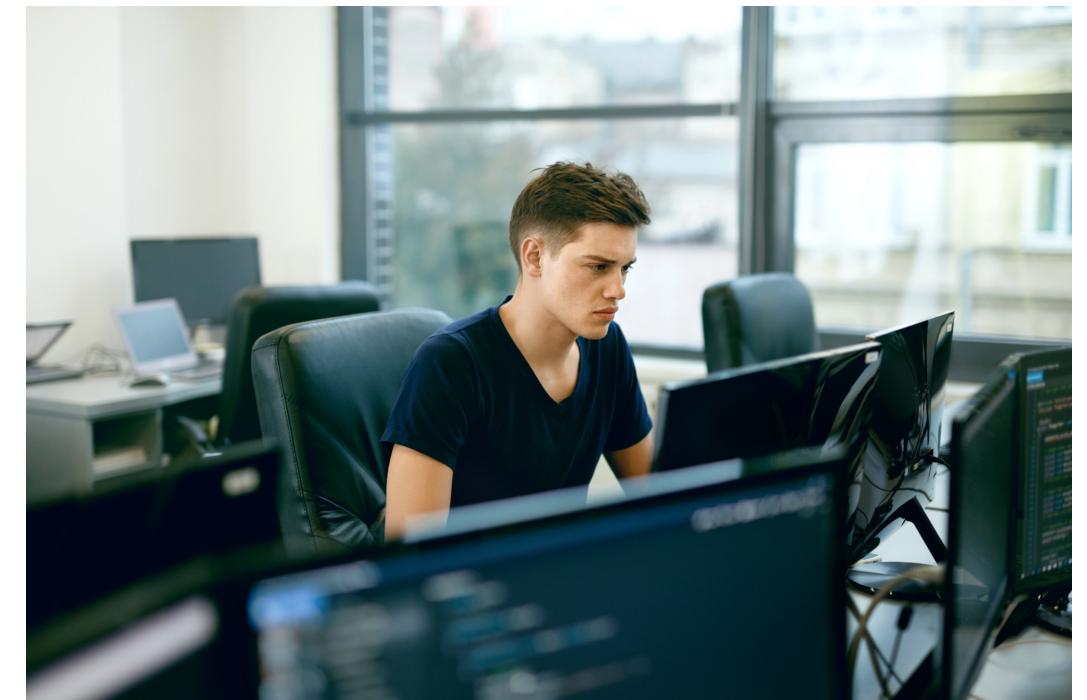
Icon or Image Chunking: Three Items



Work together



Phone a colleague



Write the code



Circle Image Chunking: Four Items



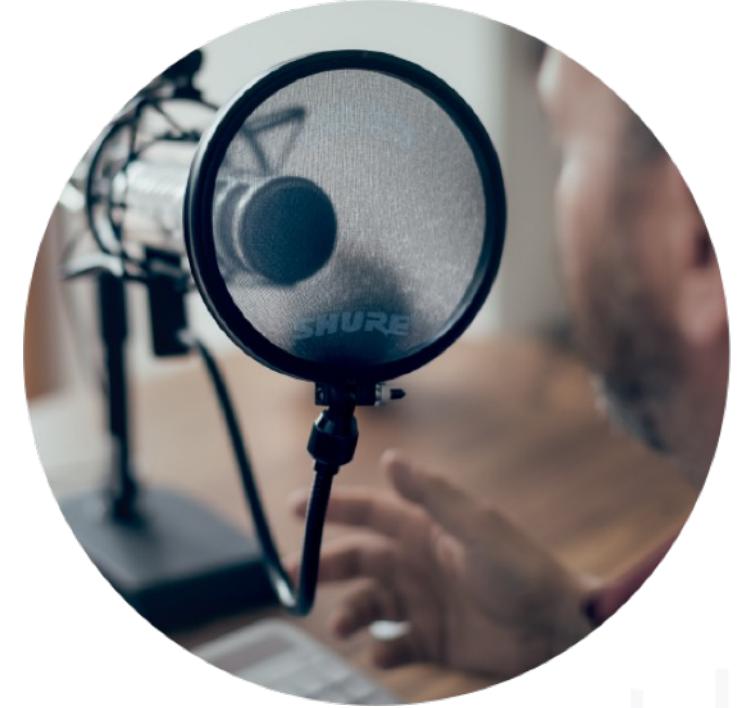
Write a script



Review it



Record audio

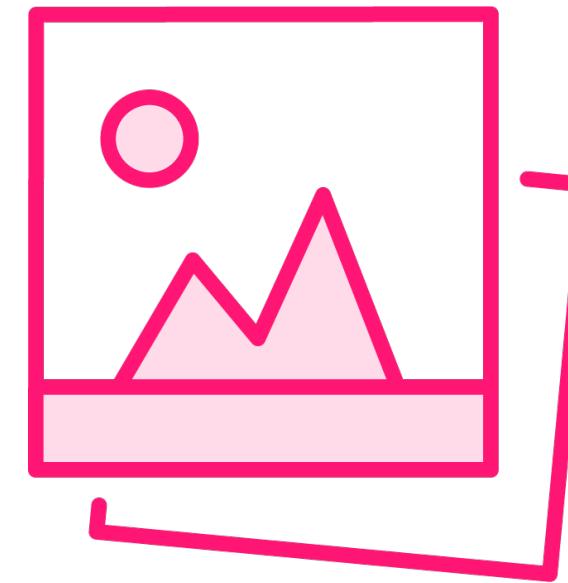


Create a demo



Description Text and Three Item Icons with Headers

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



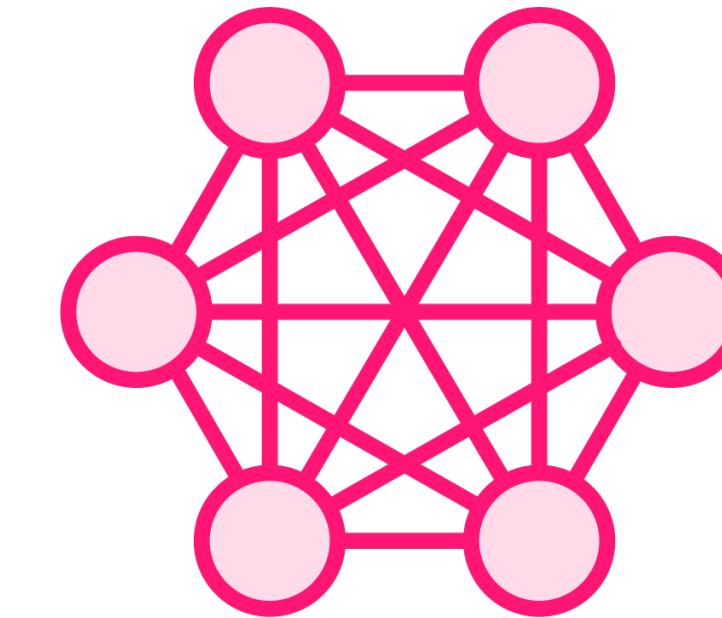
Analysis

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

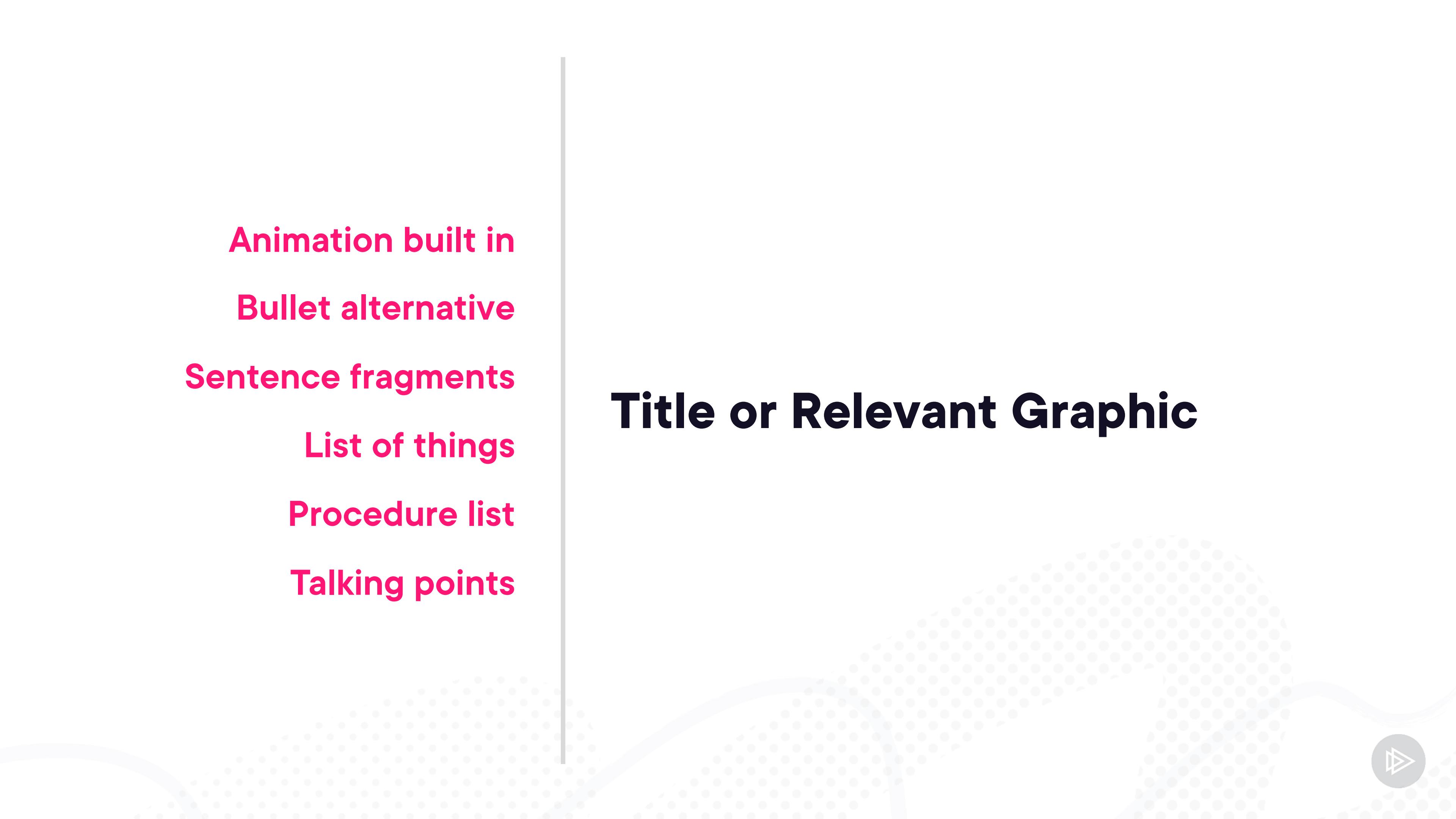
Sentence fragments

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

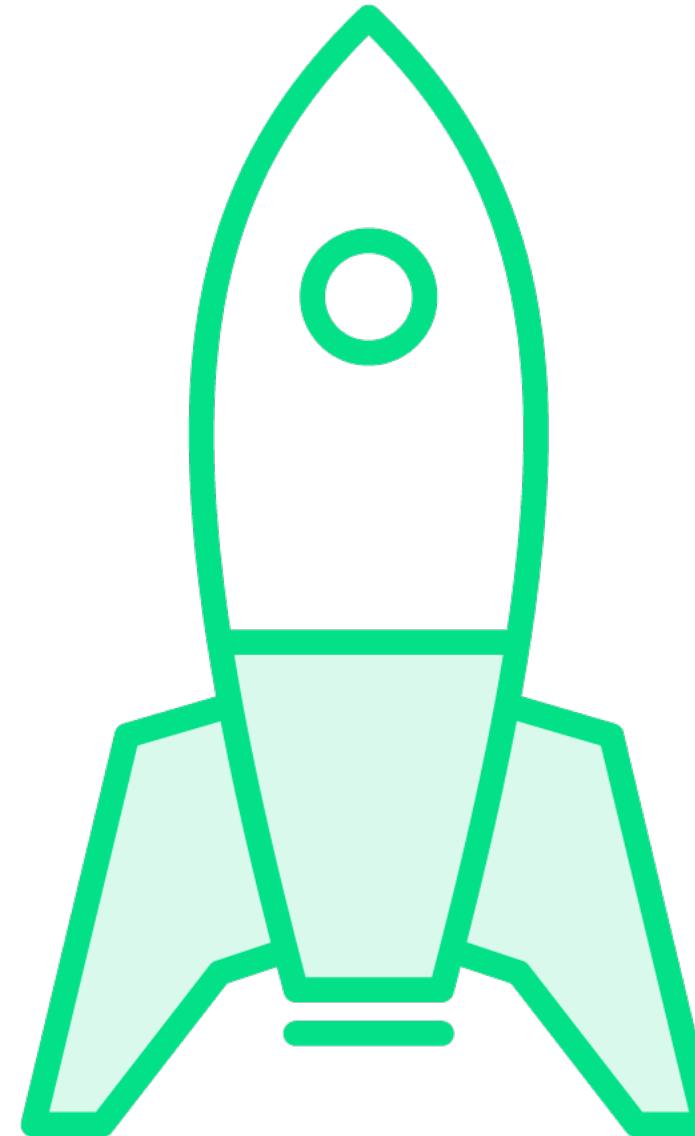
Animation built in

Room for a bit more text

Use this layout for:

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





Animation built in

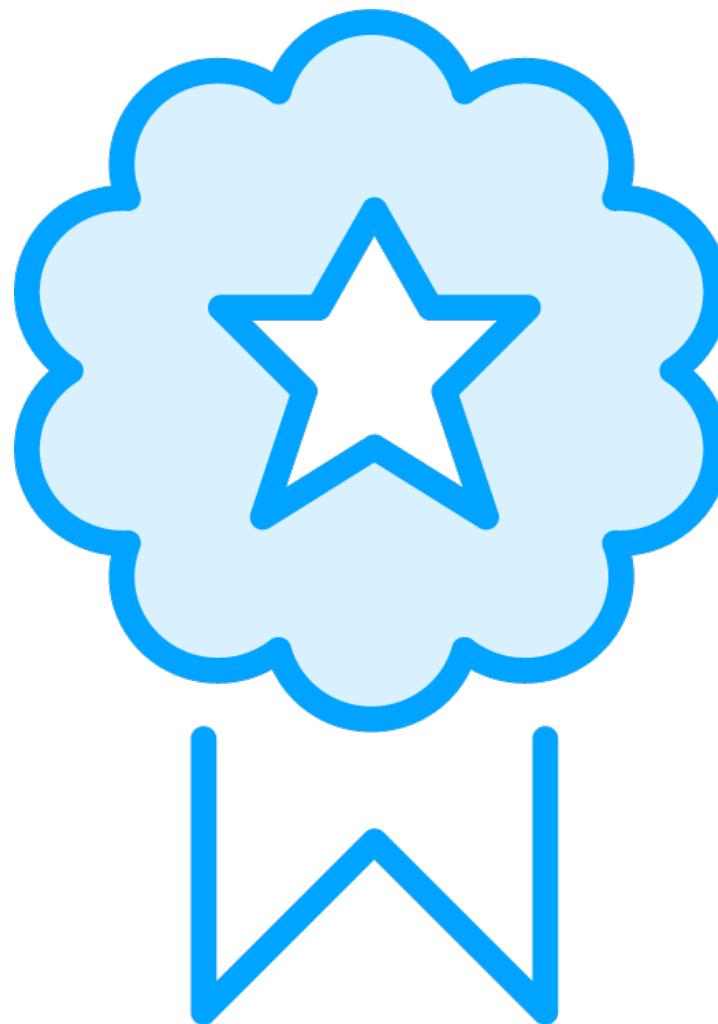
Room for a bit more text

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

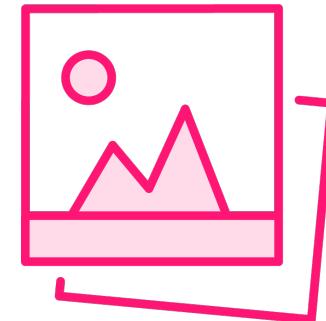
Graphic should fill the entire space

- Graphic must be high-quality and copyright-safe

Text animation is built in



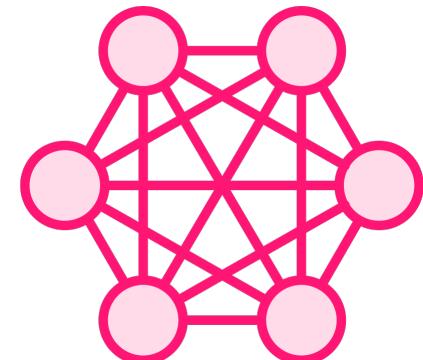
Three Item List with Icons



An image chunking option for when you have longer text



Be concise and keep each bullet to 3 lines or fewer



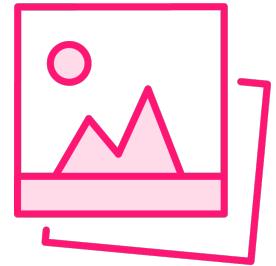
Add relevant icons on the left for each text item on the right



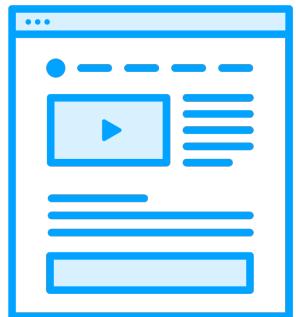
Four Item List with Icons



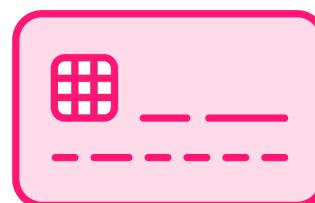
An image chunking option for when you have longer text



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



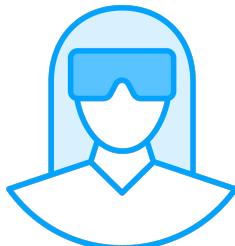
Five Item List with Icons



An image chunking option for when you have longer text



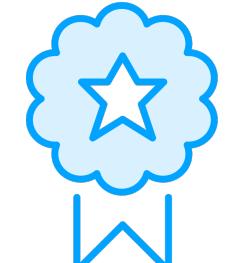
Sometimes four of these items aren't enough



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



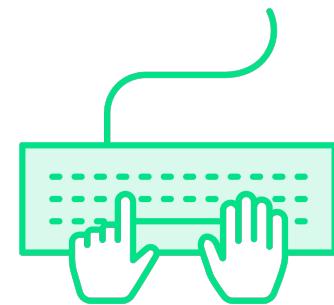
An image chunking option for when you have longer text



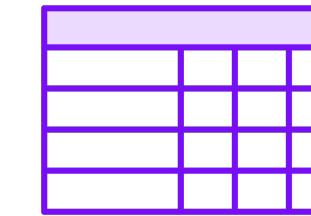
Be concise and limit the text to one line



Two Column Six Item List with Icons



Program



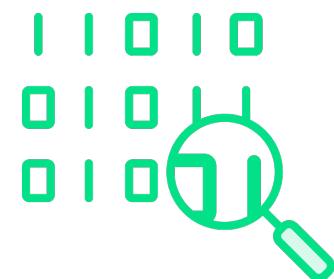
Export all that data



Take a break and read



Write up a case study



Check the data



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>
```



```
<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 | Light

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



```
<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

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

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

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

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

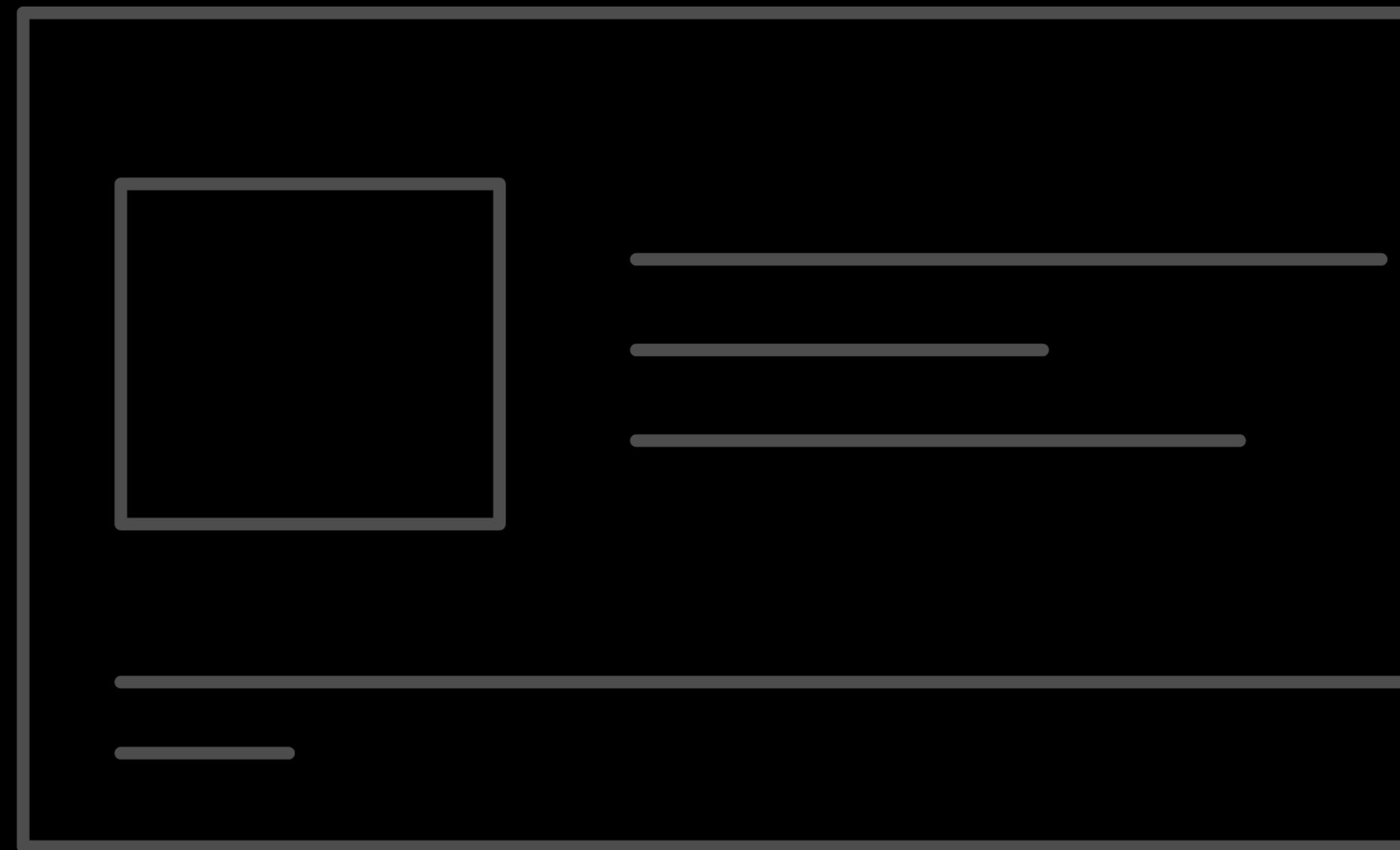
Filename.here

```
<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

Citation: Author/Source, Title, Link/Short URL



More Information

Title of Pluralsight Course

Author Name



Resources Referenced in this Course

Microsoft Docs, [Update Management Overview](#)

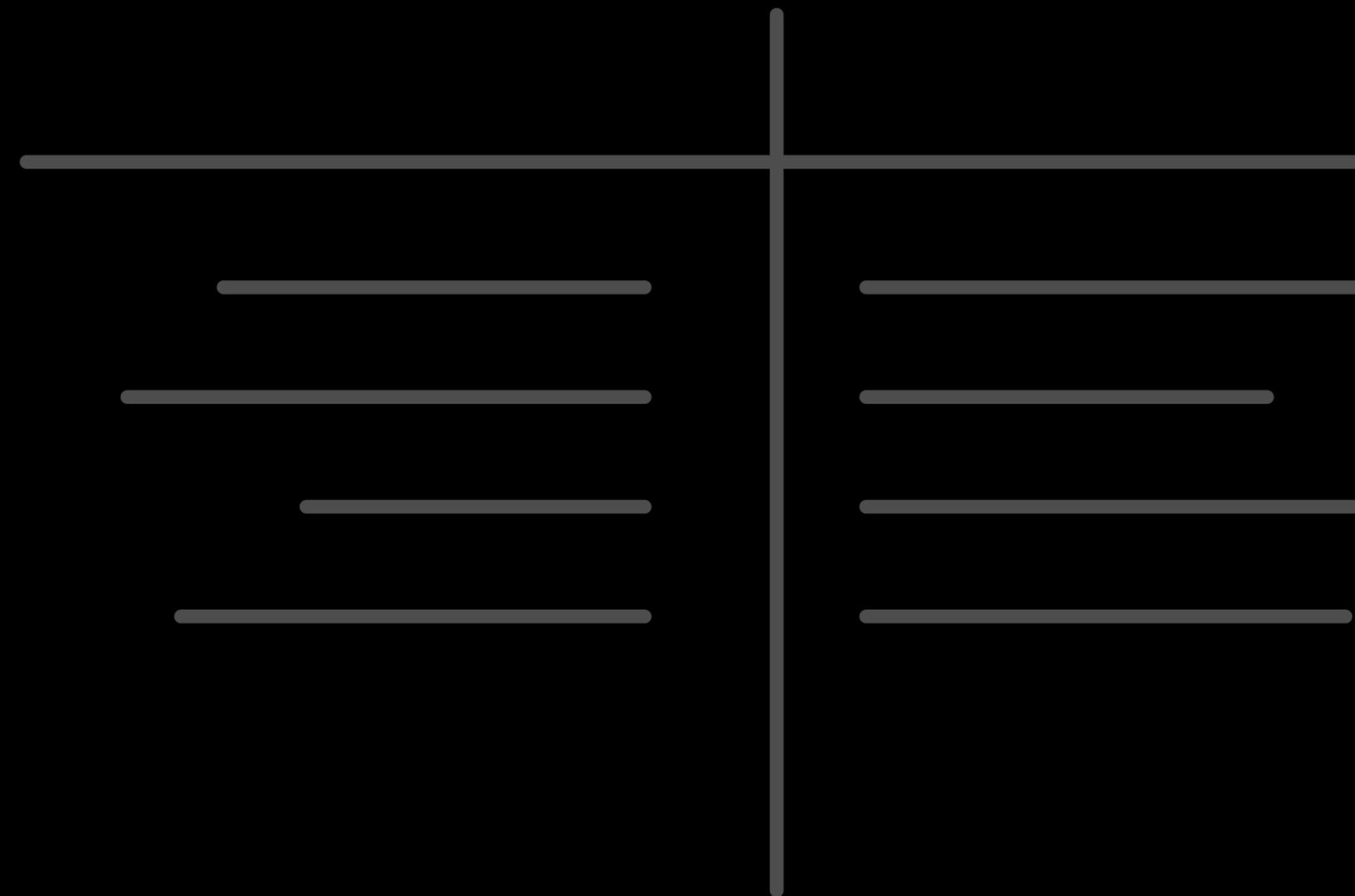
Stephen Covey, The 7 Habits of Highly Effective People

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



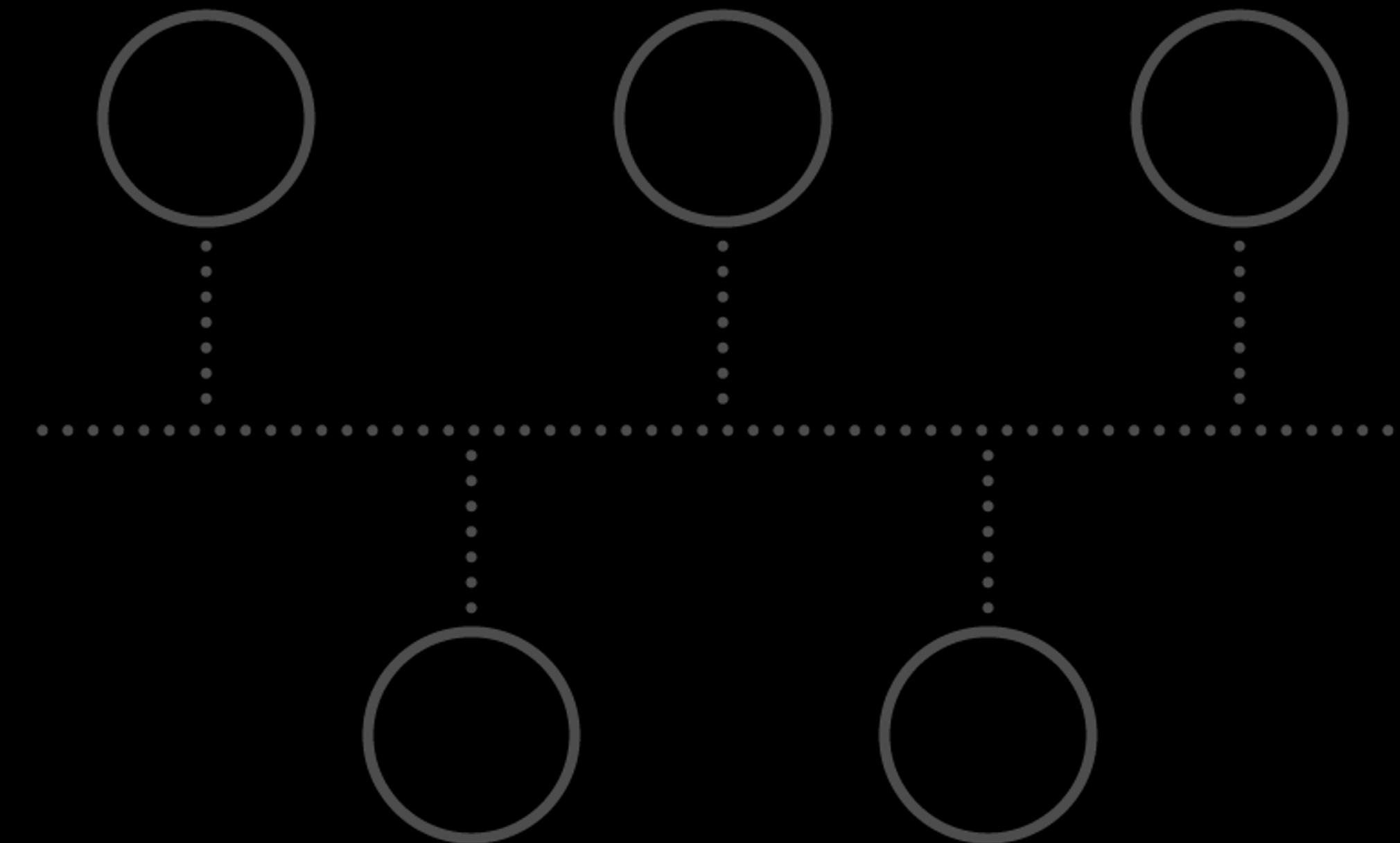
Comparison: By Item

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

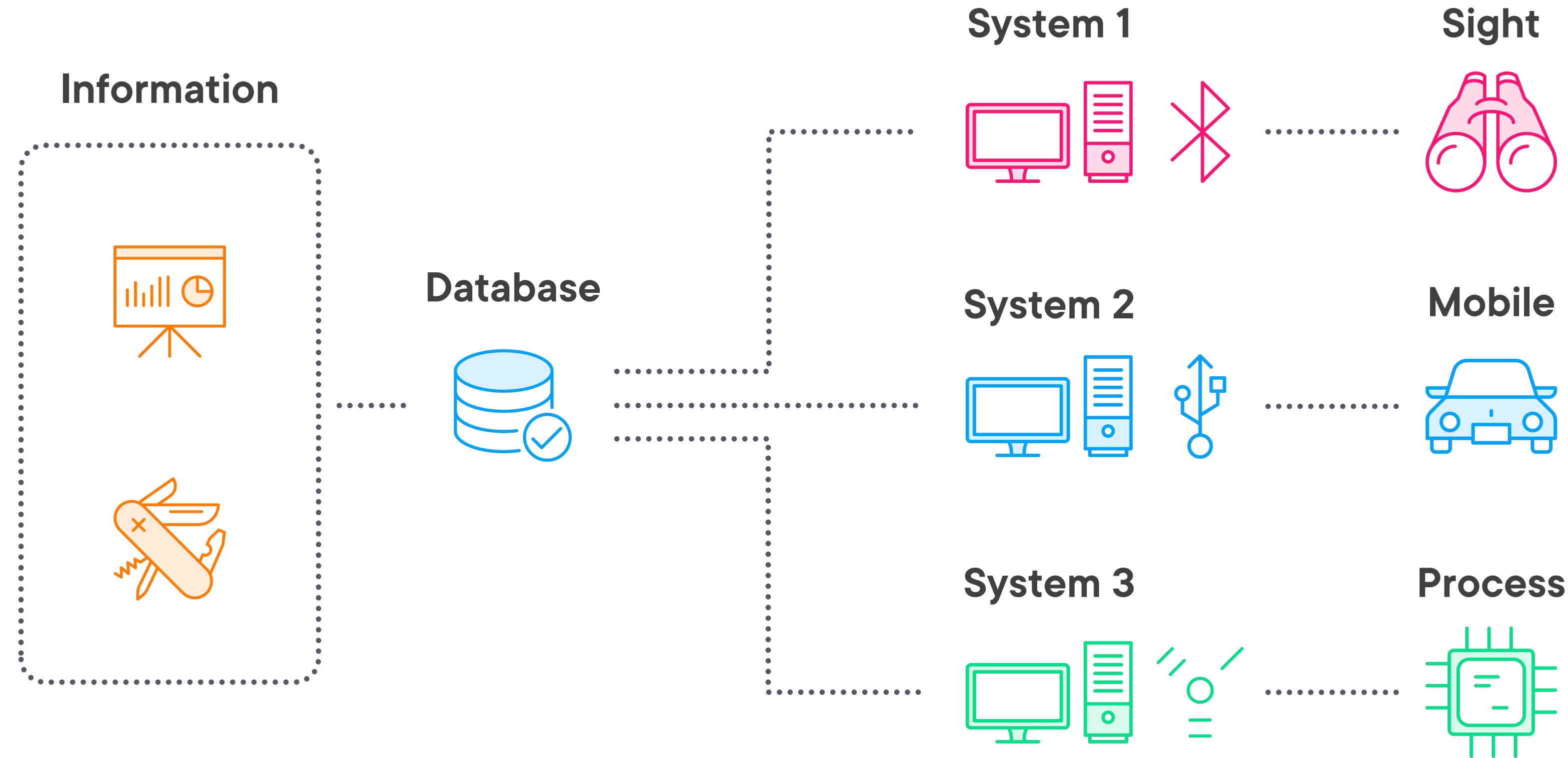


Diagrams

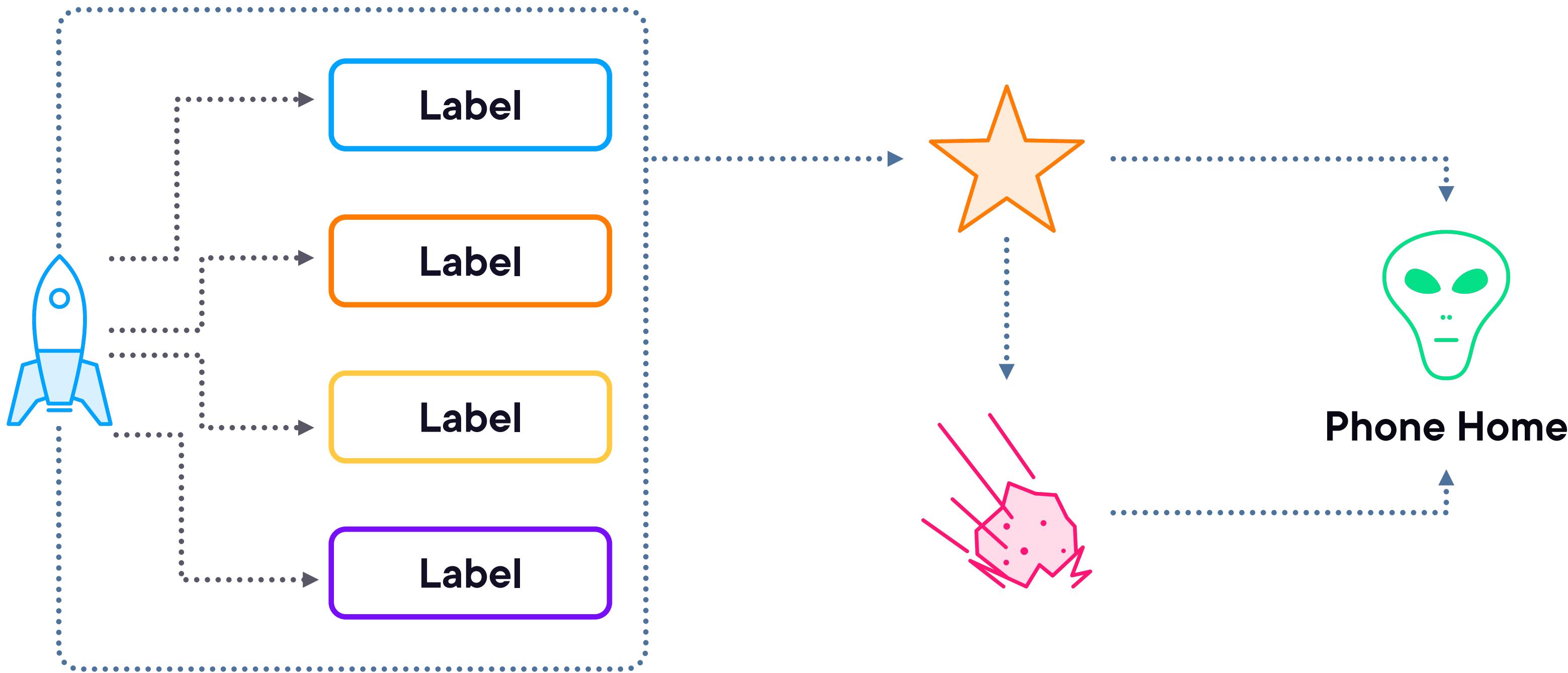
Refer to [Author Kit](#) for additional guidance

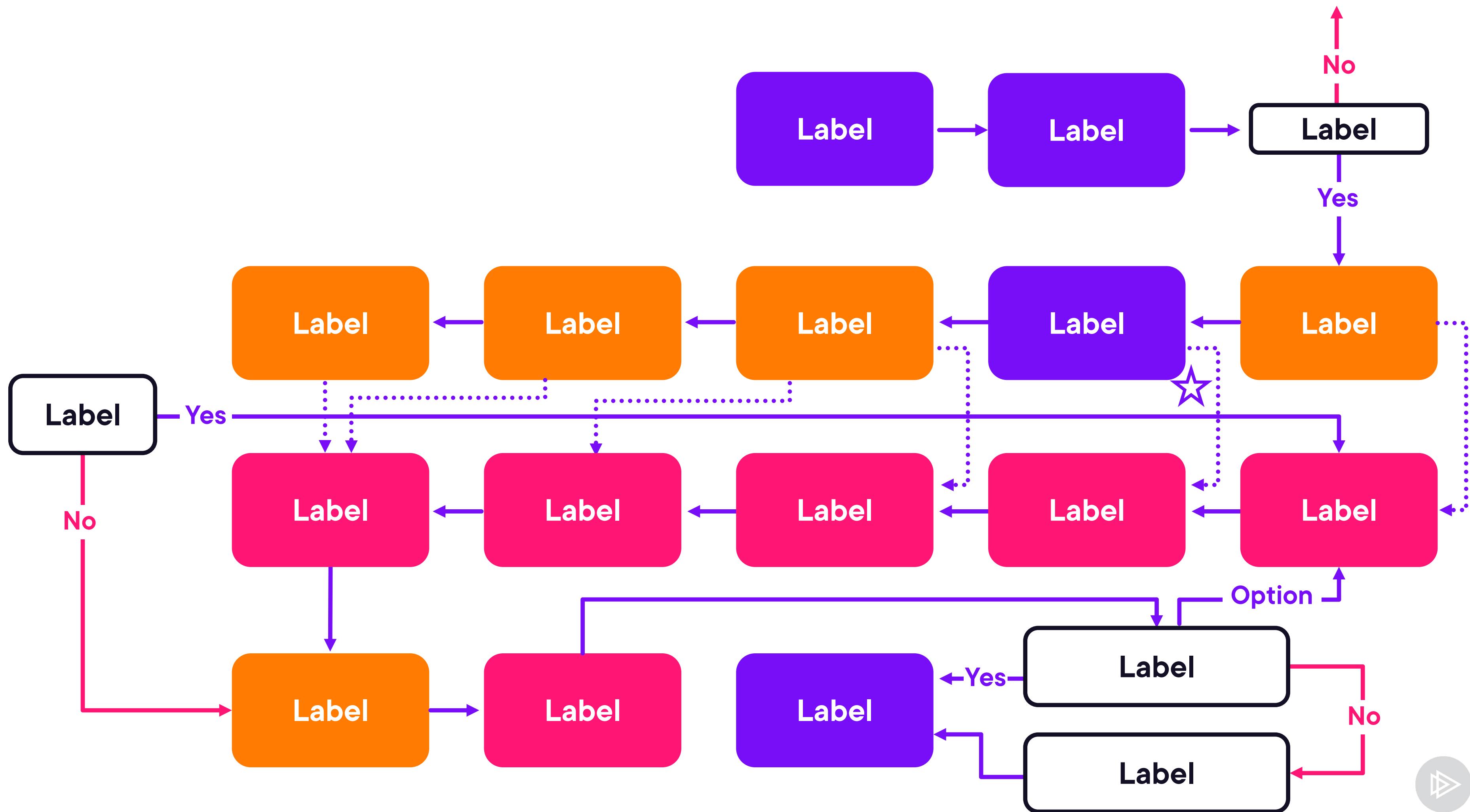


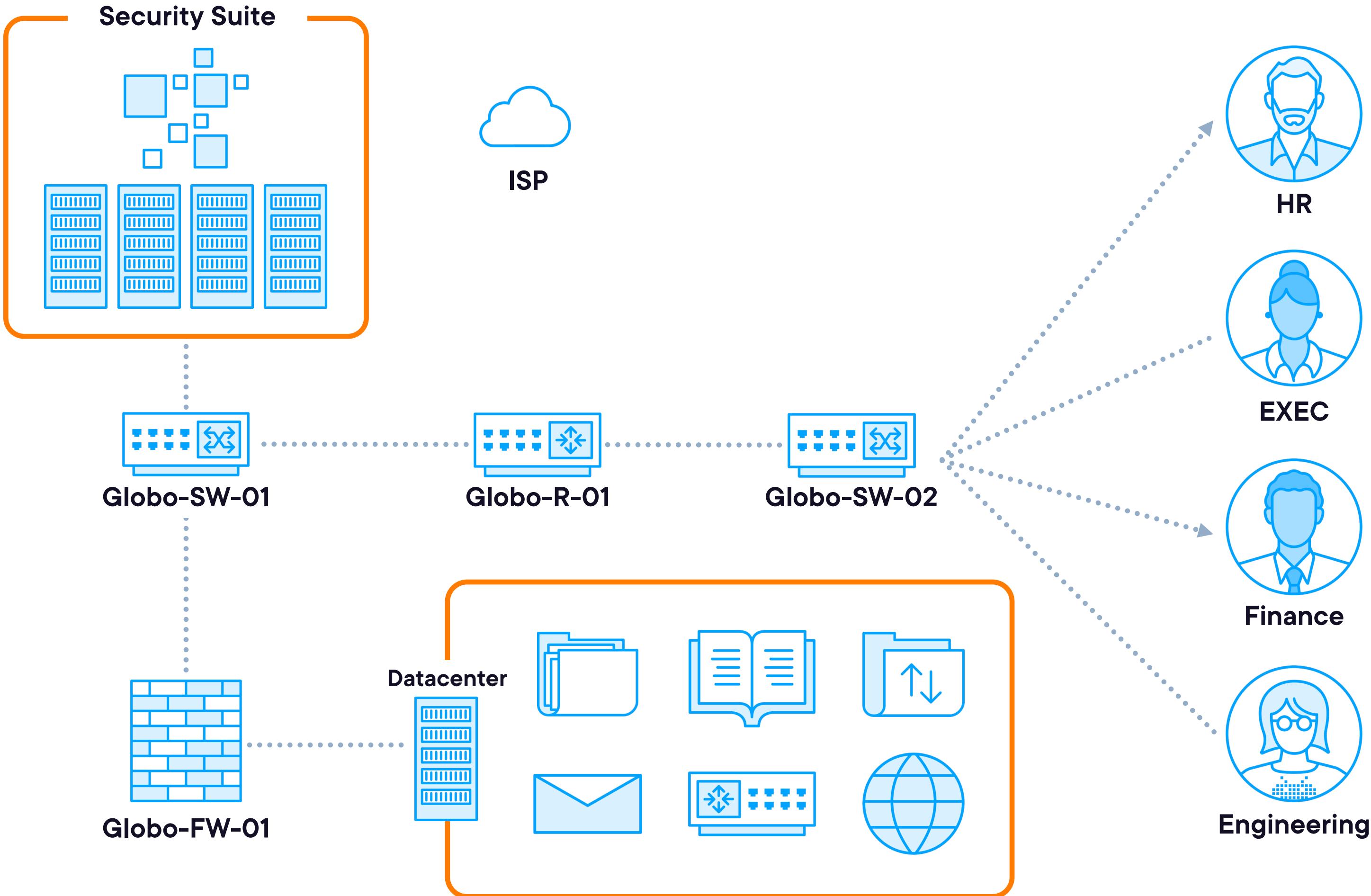
Basic Diagram



Basic Diagram

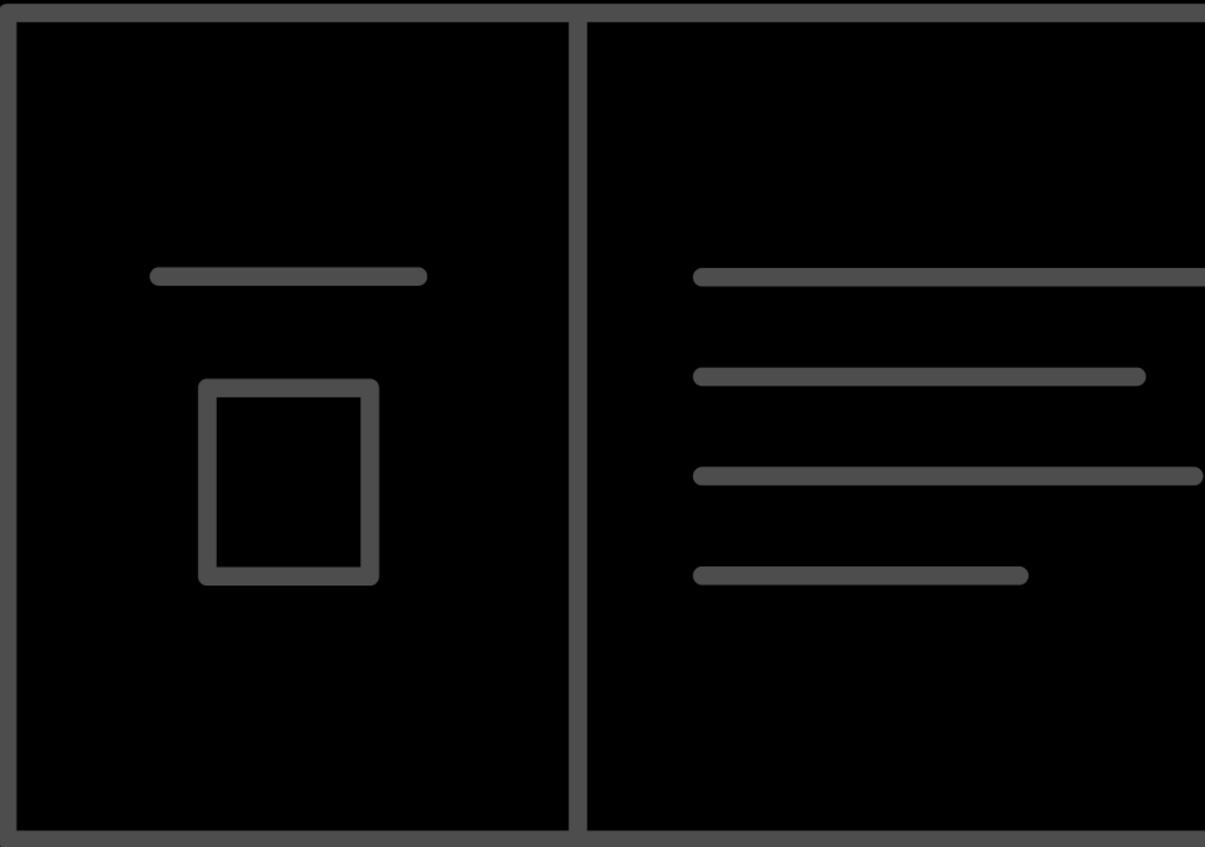
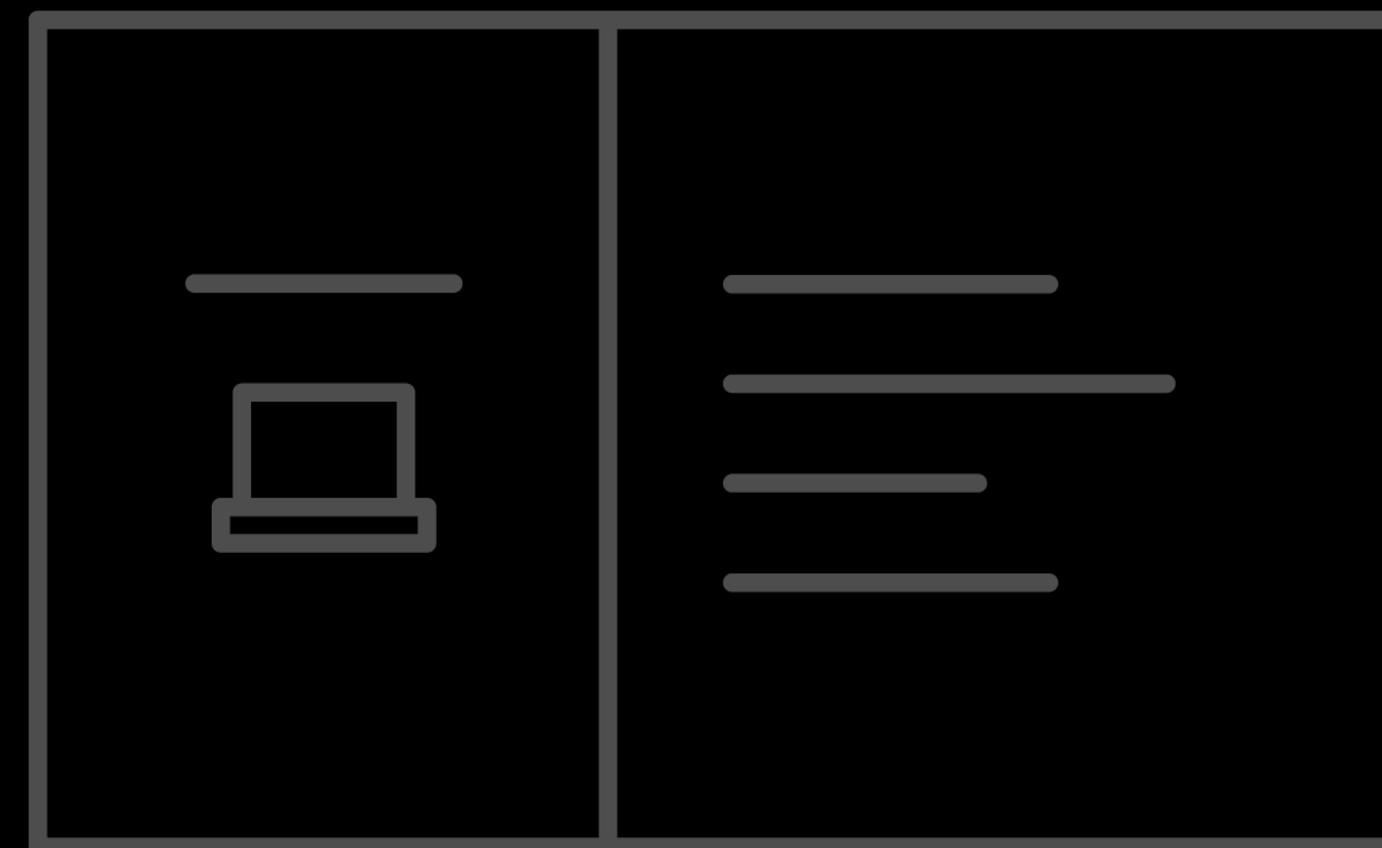






Slide Transitions

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

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

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

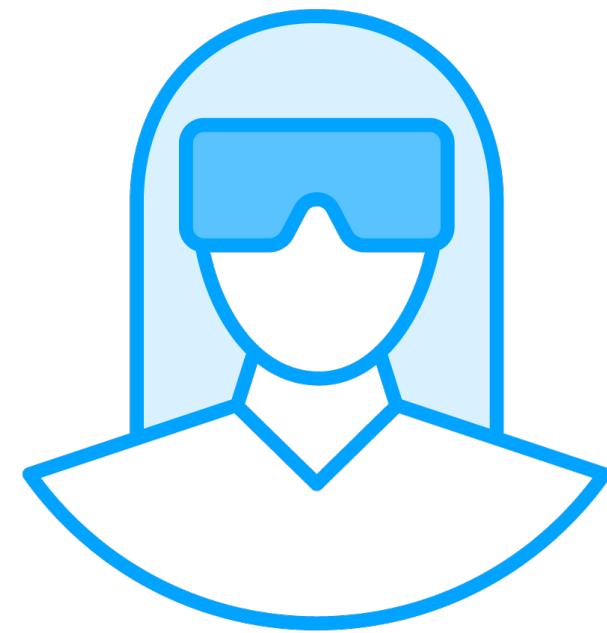
1987

Larry Wall
Integration into Perl

*View in presentation mode



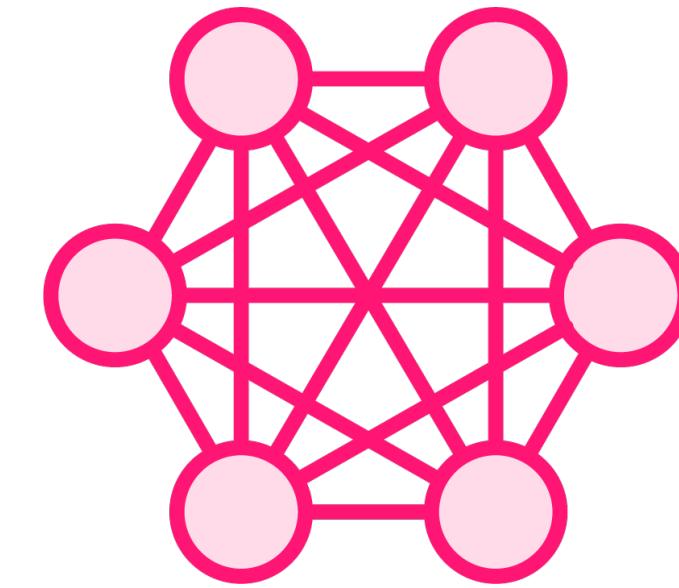
Cover/Uncover Transition



**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.

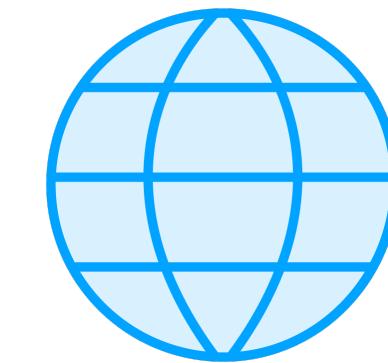
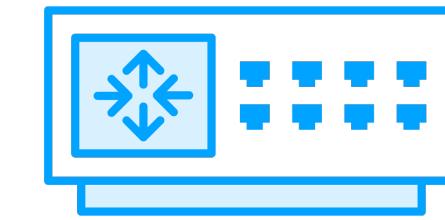
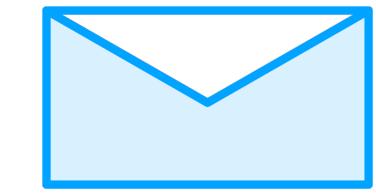
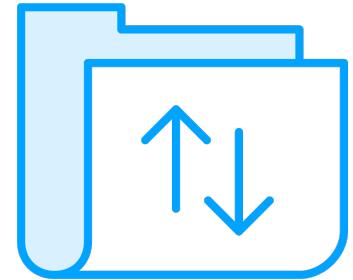
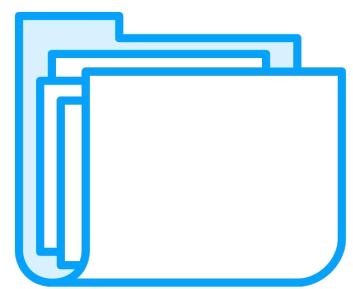


Push Transition: Step 2

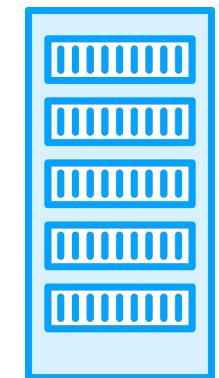
There's so much you can do.



Morph Slide Transition



Datacenter



Morph Slide Transition



Morph Slide Transition

Q1

People who love pineapple on pizza



People who loathe pineapple on pizza



Morph Slide Transition

Q2

People who love pineapple on pizza



People who loathe pineapple on pizza



Other Slides



Word Definition

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 Definition

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

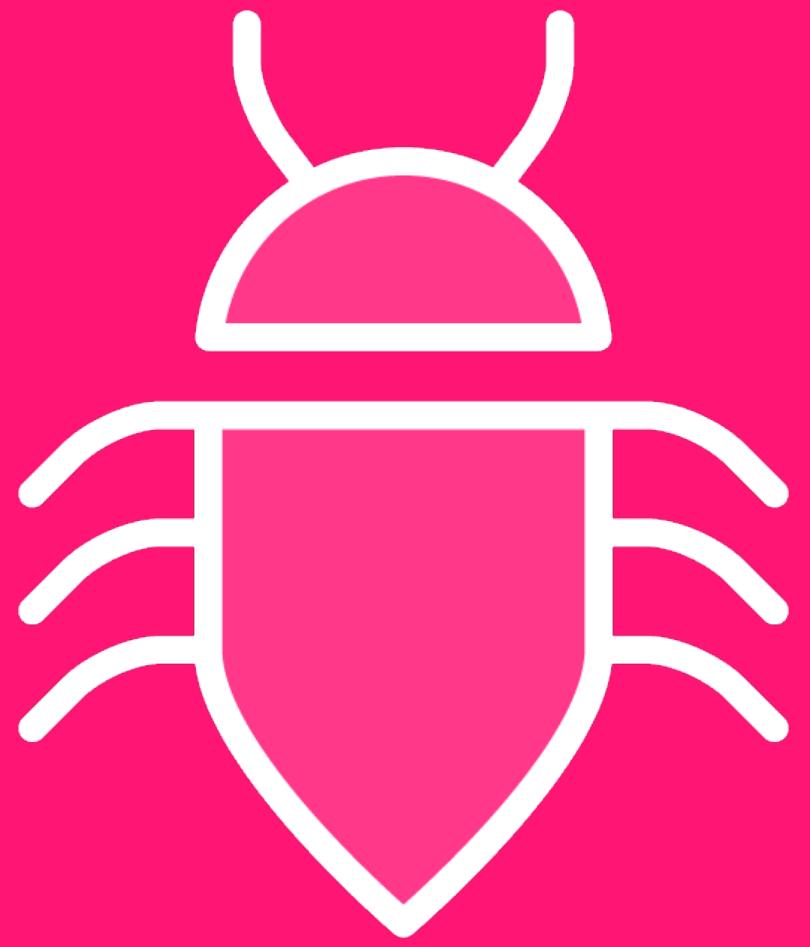
**“It is true that the more one
learns the less one knows.”**



Anaïs Nin

“Each friend represents a world in us, a world possibly not born until they arrive, and it is only by this meeting that a new world is born.”





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.**



A vibrant hot air balloon with a multi-colored envelope (purple, yellow, red, blue) is shown from a low angle, flying over a lush green vineyard. The sky is a dramatic sunset, transitioning from deep blue to bright orange and yellow. A small white rectangular box with a purple vertical bar on its left edge contains the text.

You can use full-screen images too