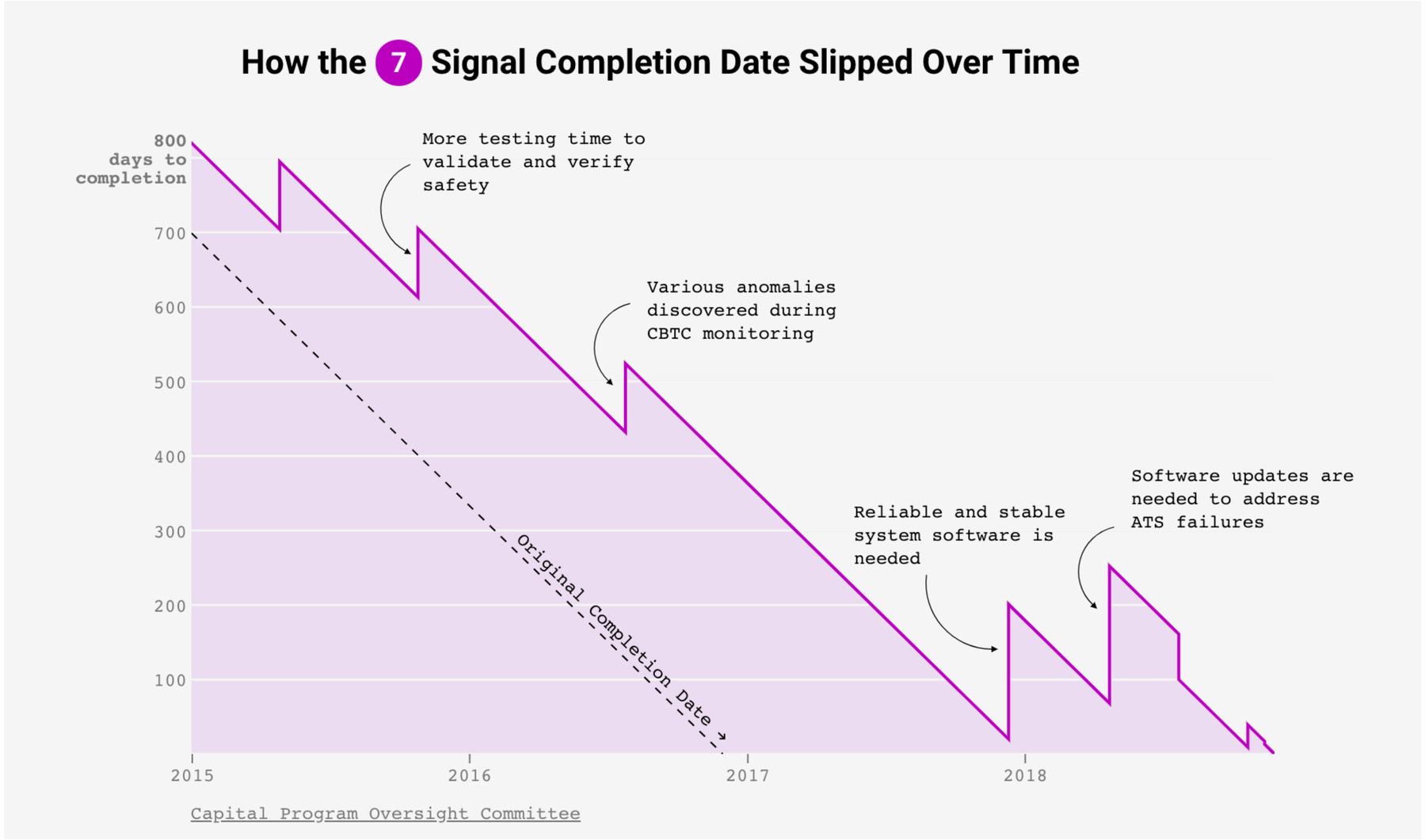
Data Visualization & Design

Week 11

This week in **visualization**…

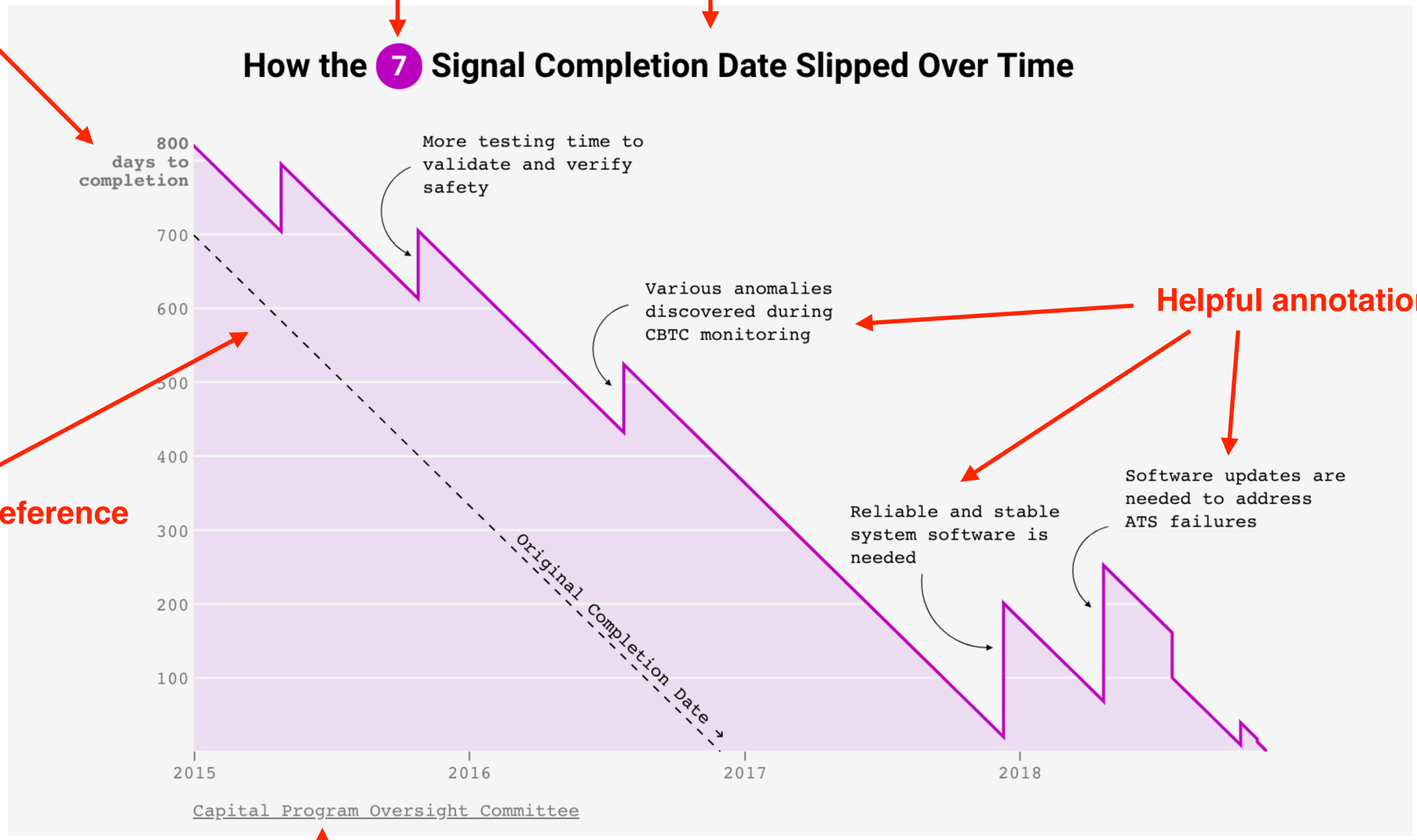

How the 7 Signal Completion Date Slipped Over Time
800 days to completion
700
600
500
400
300
200
100
2015
2016
2017
2018
More testing time to validate and verify safety
Various anomalies discovered during CBTC monitoring
Reliable and stable system software is needed
Software updates are needed to address ATS failures
Original Completion Date
Capital Program Oversight Committee

[Source]

Countdown format paints picture of interrupted project process

Creative touch

Informative title



Helpful annotations

"Ideal" path for reference

Data source cited

[Source]

1. **VR Demo** (Google Cardboard)
2. Principles of **Gamification**
3. **VR Design** Considerations
4. Programming Concept: **For-Loops**
5. Studio: Introduction to VR with **A-Frame**

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Google Cardboard

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1. The App Experience Evolves with the User

It’s important to think about your product as multiple experiences. In gaming, players generally go through a tutorial first, and then for days or weeks after, are given basic missions and slowly ramped to more difficult ones.

2. Identify the “Core Loop”

This is the heart of gamification — building systems that reward and incentivize player, so they feel some accomplishment for engaging in these main actions.

Example: ***LinkedIn***

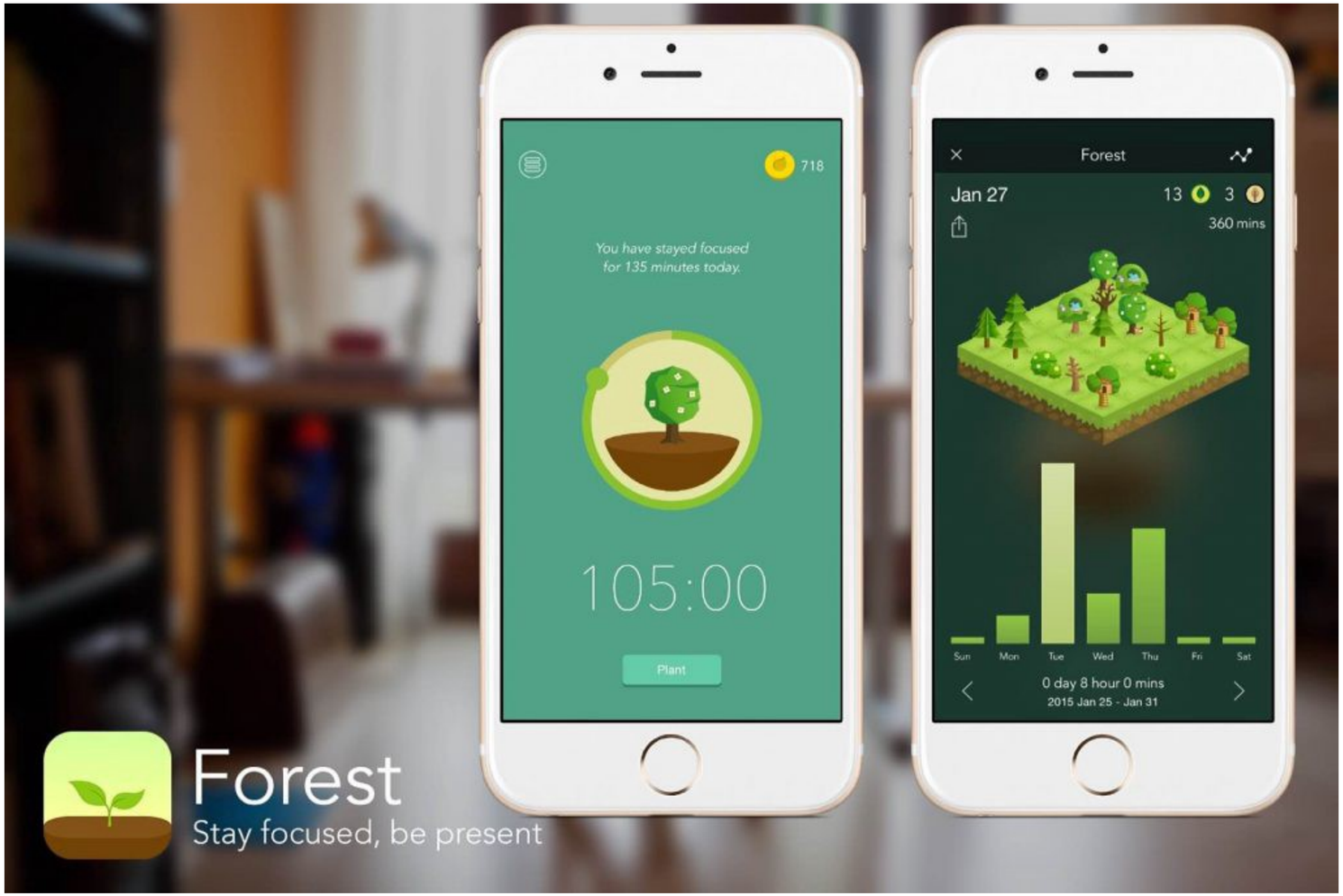
3. Limited Resources

Users crave to be smart, and by constraining or limiting actions based on resources available, players will naturally try to maximize their experience.

4. Instill a Sense of Ownership

If players are able to personalize something, then they will have a greater affinity for the product as a whole.

Example: ***Forest***



5. Integrate Social to your Experience

For engaged users, social is hyper important instill a sense of belonging to your app, website, or service.

By designing incentives to complete a desired action, users will be **more likely** to complete the action in the future.

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Designing for a new dimension is **hard**.

In virtual reality, best practices are informed by **physiological considerations**, along with human perception and cognition.

1. Avoiding simulator sickness

Mismatches between physical and visual motion cues can give rise to nausea.

2. Familiarity

Because a virtual reality canvas is infinite, it is important to provide the user with cues for focus and attention as they explore a new environment.

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```
print(“hello”);
```

```
print(“hello”);

=hello
```

```
myArray = [1,2,3,4,5];
```

```
print(myArray);
```

```
print(myArray);

=[1,2,3,4,5]
```

```
print(myArray[0]);
```

```
print(myArray[0]);
```

=1

```
print(myArray[0]);
print(myArray[1]);
print(myArray[2]);
print(myArray[3]);
print(myArray[4]);
```

```
print(myArray[0]);
print(myArray[1]);
print(myArray[2]);
print(myArray[3]);
print(myArray[4]);
```

```
=12345
```

```
for(int i=0; i < 5; i++)
{
    print(myArray[i]);
}
```

```
for(int i=0; i < 5; i++)
{
    print(myArray[i]);
}

=12345
```

Define and set starting point for counter

Set limit for counter

Count up +1 every time

```
for(int i=0; i < 5; i++)
{
    print(myArray[i]);
}
```

Access counter value

```
for(int i=0; i < 5; i++)
{
    print(myArray[i]);
}

=12345
```

```
for(int i=0; i < myArray.length; i++)
{
    print(myArray[i]);
}
```

```
for(int i=0; i < myArray.length; i++)
{
    print(myArray[i]);
}
```

```
=12345
```

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https://github.com/emilyfuhrman/datavis_design/blob/master/2018_Fall/Studios/06_Introduction_to_VR_with_A-Frame.md