

Building better Games with the right DevOps tools



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A grayscale image of a heavy, circular vault door that is open, revealing a grid of many small drawers or compartments inside. The door is thick and has multiple locking bolts visible around its edge. A small step ladder is positioned at the entrance of the vault. The background is a dark, textured wall with rows of small circular holes.

Next to people, source code is a
studio's most valuable asset.



Teams are under pressure to
deliver more with less.



More studio applications are integrating with
DevOps tools.





Studios want to keep focus on
their Games.

ACME Studio Inc.

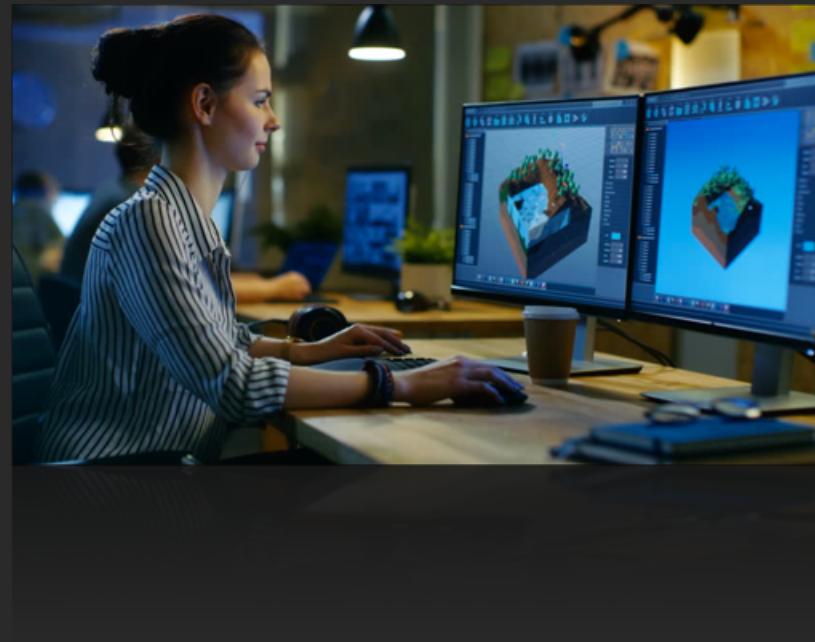


Artists/Concept

ACME Studio Inc.



+



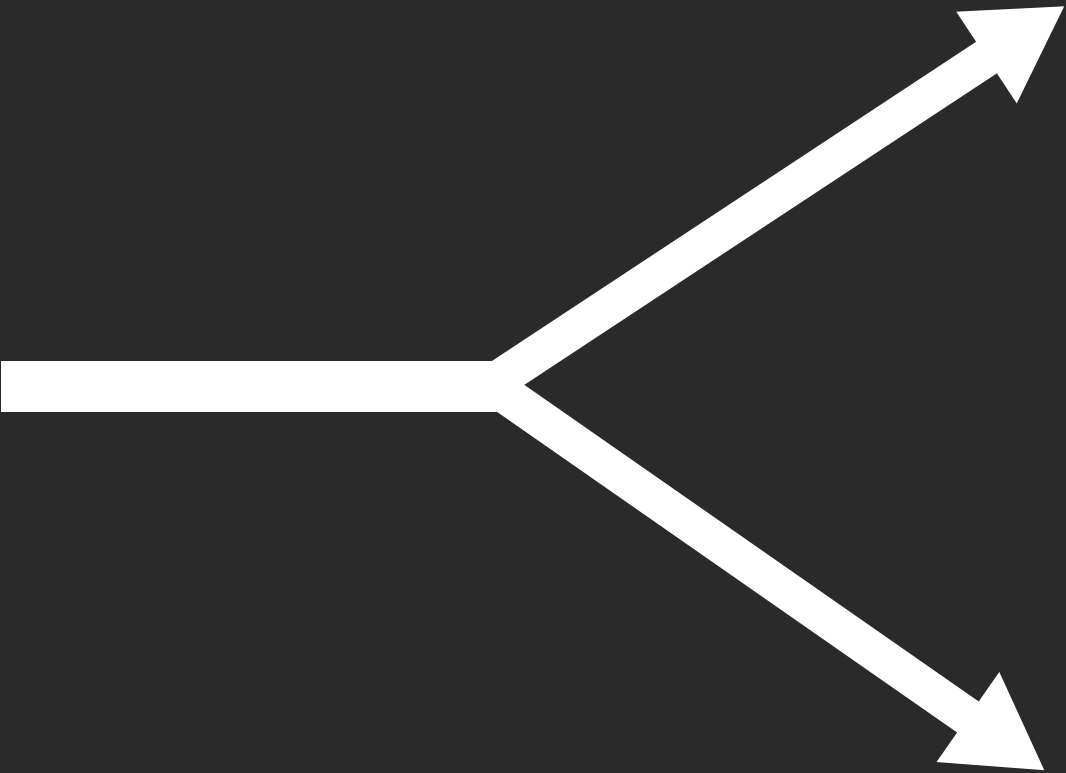
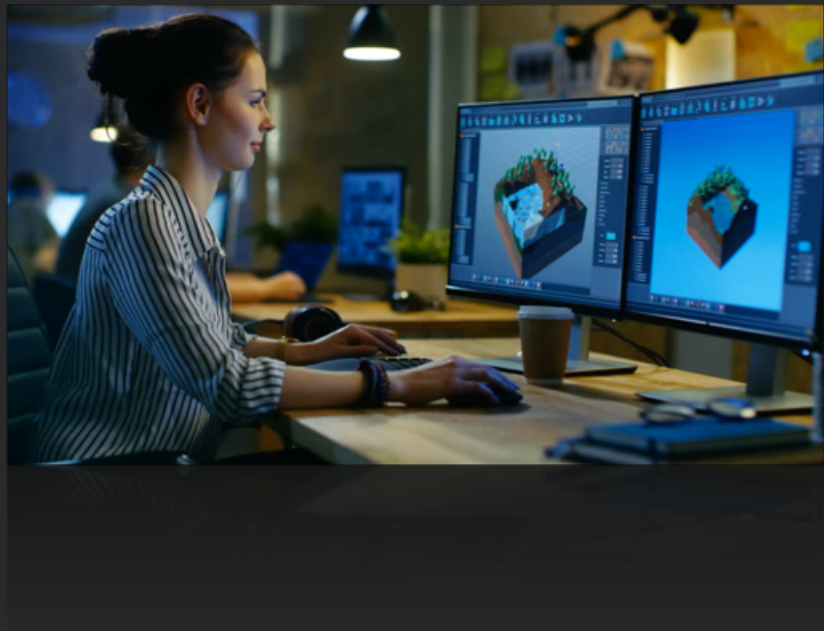
Artists/Concept

*Animators/
Developers*

ACME Studio Inc.



+



Artists/Concept

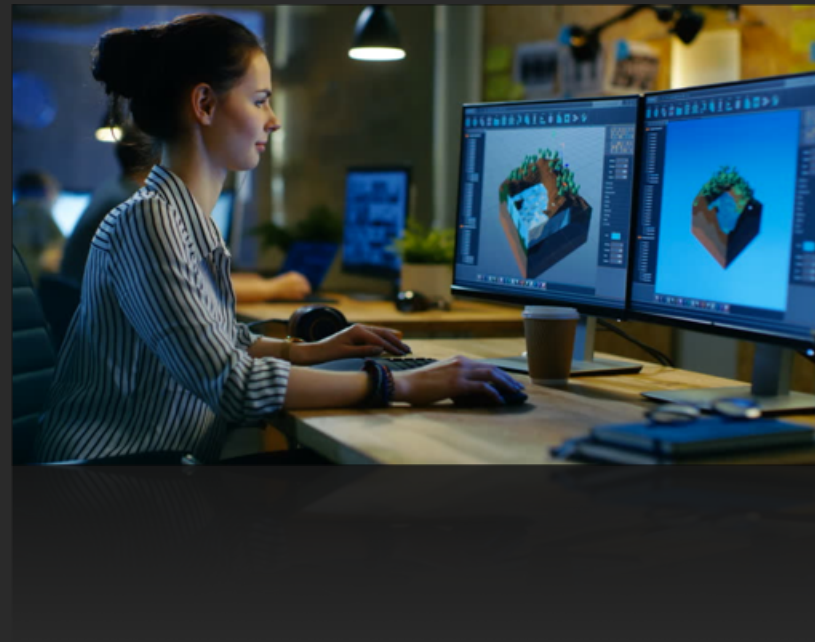
*Animators/
Developers*

Publishers/Gamers

Lets look at the key tools.



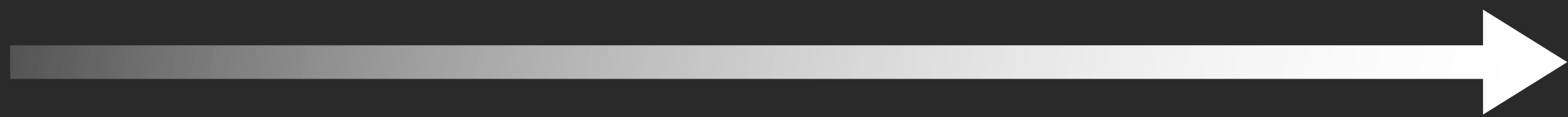
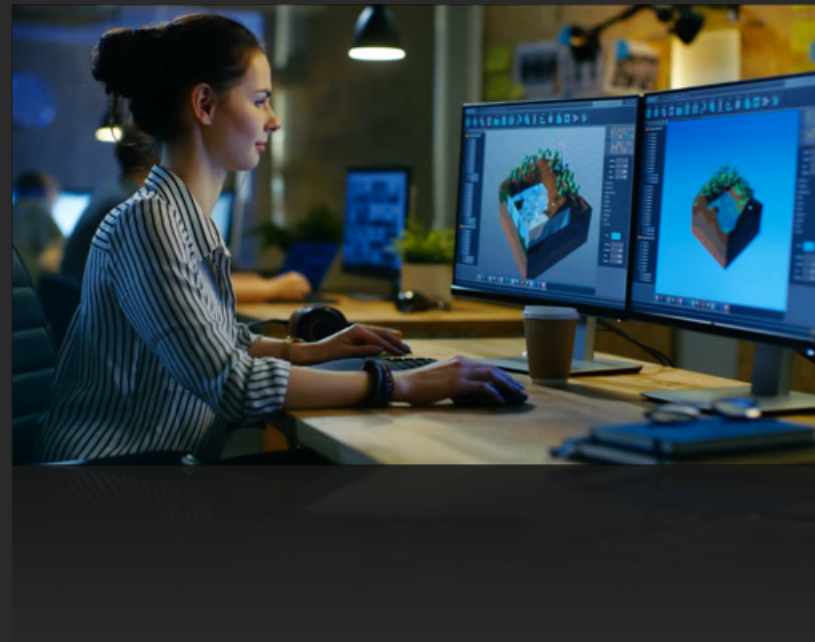
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Artists/Concept

*Animators/
Developers*

Asset versioning is key.

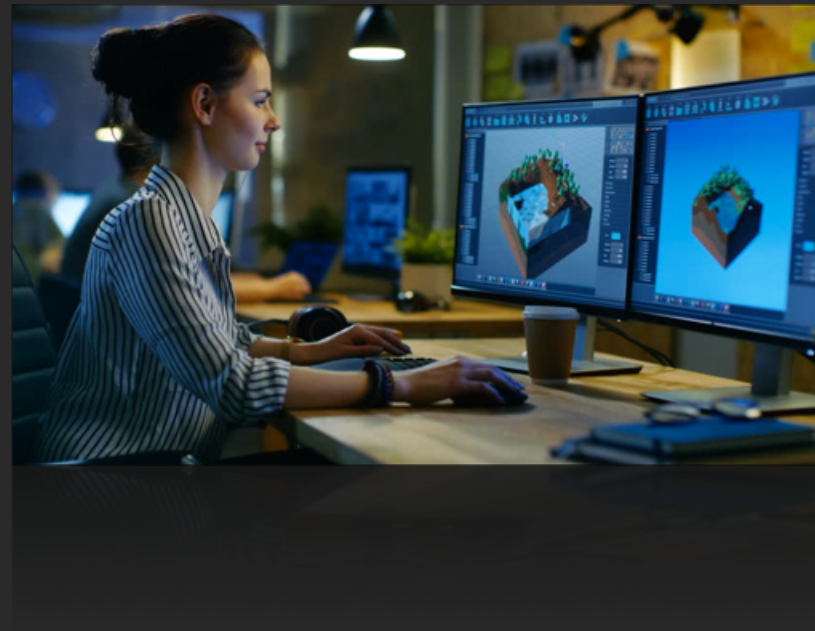


Source
Code
Management

Artists/Concept

*Animators/
Developers*

Repeatable build process.



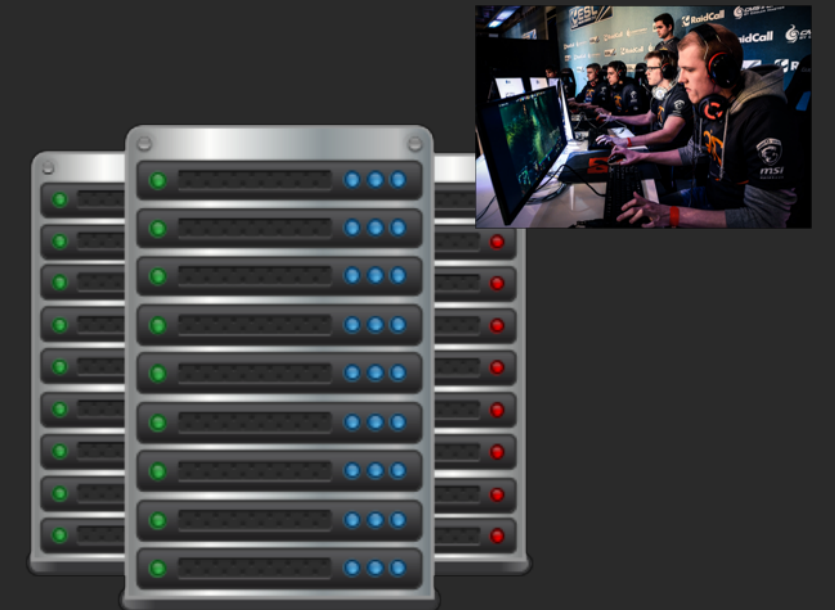
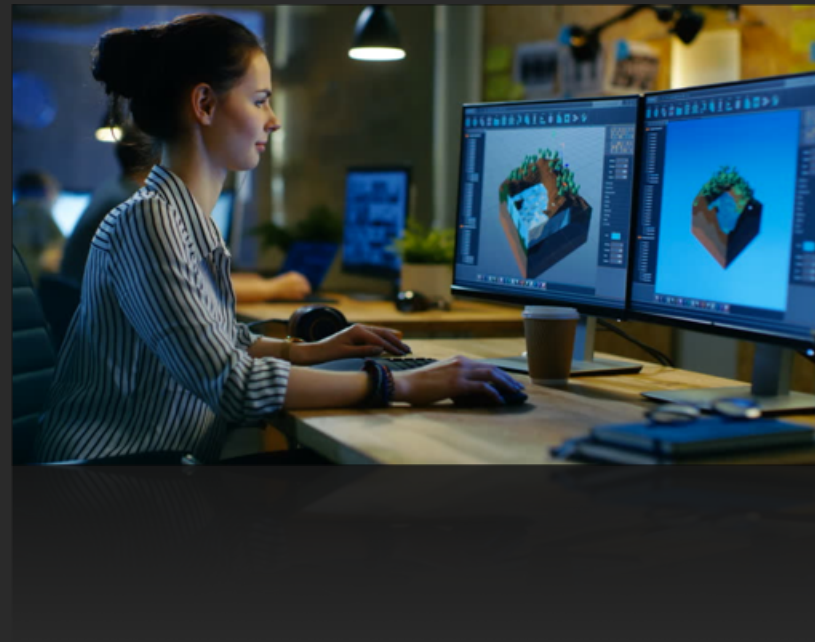
Source
Code
Management

Builds

Artists/Concept

*Animators/
Developers*

Think about deployment day 0



Source
Code
Management

Builds

Game Production
Servers

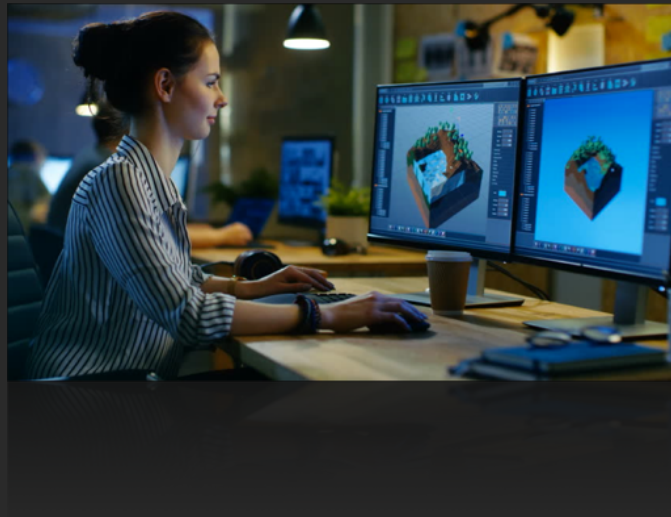
Artists/Concept

*Animators/
Developers*

Focus on your games.

Team Distraction

Animators/
Developers



Artists/Concept




Source
Code
Management

Builds

Game Production
Servers

A large crowd of people is gathered at a conference or event. In the background, there is a stage with several large screens displaying content. The scene is dimly lit, with blue and purple ambient lighting. The text "Find a DevOps solution that can scale." is overlaid in the center of the image.

Find a DevOps solution that can
scale.

A rocket streaks diagonally across a clear blue sky, leaving a white trail. Below the sky, a range of rugged, snow-capped mountains is visible under a hazy atmosphere.

Majority of studios have no
expertise on how to
maximize [setup]
their DevOps
workflows.

What do studios look for in a DevOps solution?



DISASTER RECOVERY



SCALABILITY AND PERFORMANCE



COLLABORATION



ASSEMBLA

A satellite with solar panels is shown in orbit over a landscape of brown, hilly terrain and a dark blue body of water. The satellite is white with black solar panels.

What COULD happen, often does.



DISASTER RECOVERY



SCALABILITY AND PERFORMANCE

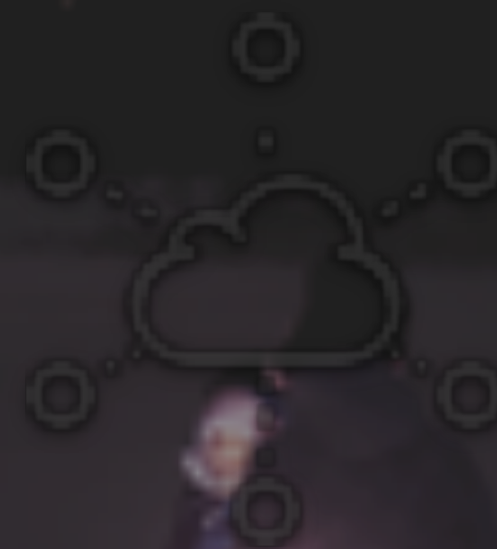


COLLABORATION

Team collaboration is paramount. Ditch the VPN.



DISASTER RECOVERY



SCALABILITY AND PERFORMANCE



COLLABORATION



zapier

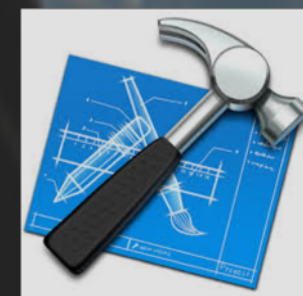


React

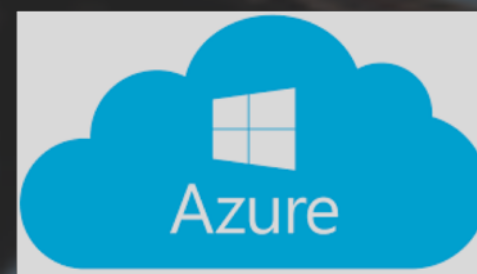
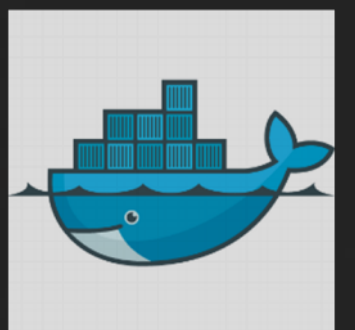


Aha!

Altium



Integrations.



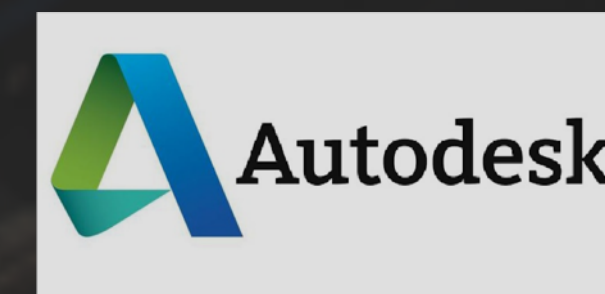
asana



ATLASSIAN

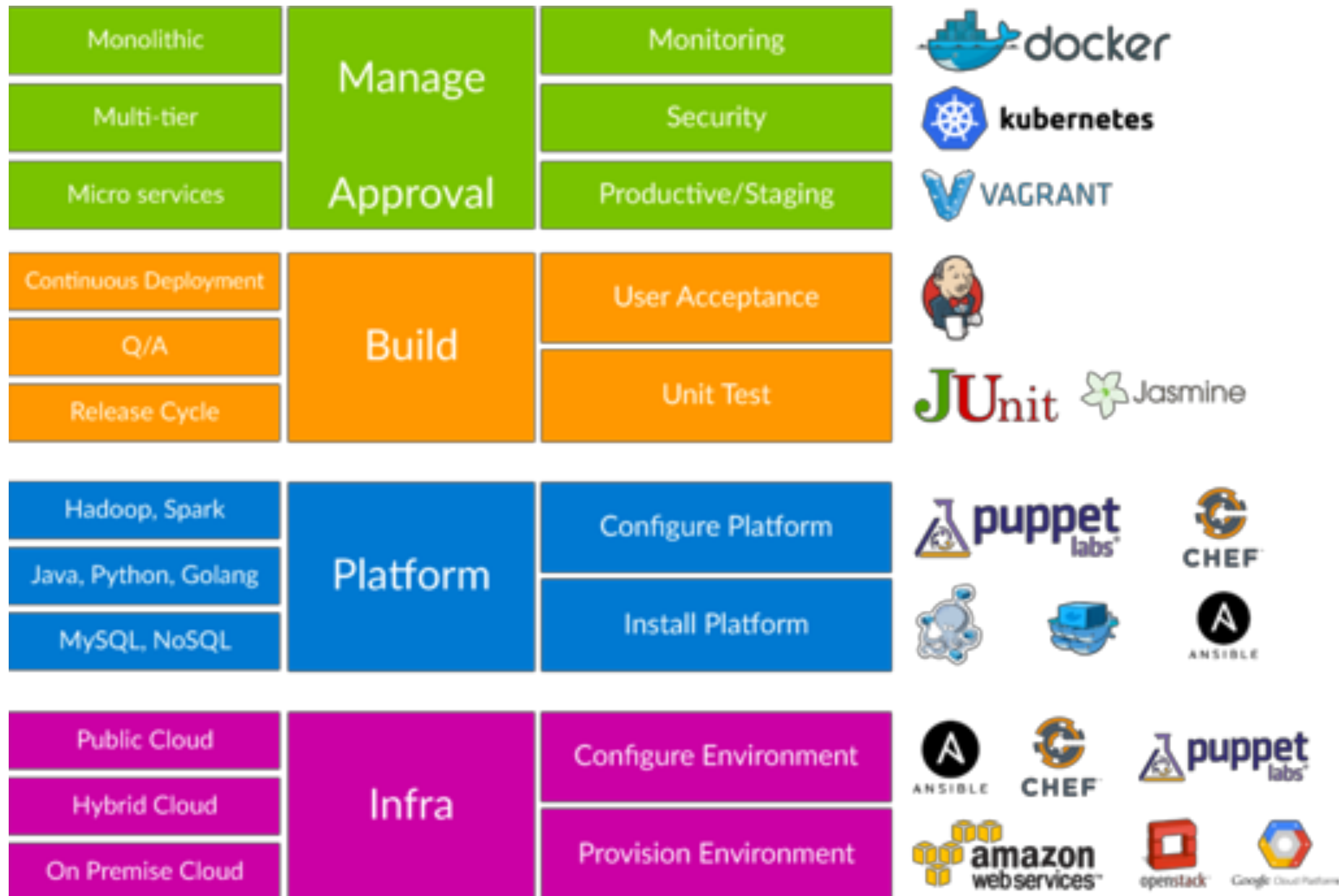


node JS



A person is working at a desk. They are holding a white smartphone in their left hand and a black credit card in their right hand. On the desk, there is a laptop, a pen, and a cup of coffee. The background is slightly blurred, showing a patterned shirt. The text "A DevOps solution is about flexibility." is overlaid in the center of the image.

A DevOps solution is
about flexibility.



DevOps relies on Version Control
at its core.

Version Control compared:



Subversion

- Good UE4 integration
- Simple use cases
- Cannot scale past 500GB
- Slow Branching

Version Control compared:



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Git-LFS

- Weakest engine integration
- Proven “Pull Requests”
- Super powerful branching
- Really struggles with large files
- Still a work in progress but loads of community!

Version Control compared:



Subversion

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Perforce

- UE4/Unity/LY Integration
- Gold Standard
- 10TB+ scaling
- Server side shelving
- User Access Control
- Cloud or On-Prem Flexibility



Git-LFS

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- Proven “Pull Requests”
- Super powerful branching
- Really struggles with large files
- Still a work in progress but loads of community!

Let's not forget about asset distribution.



DISTRIBUTION IS
COMPLEX



\$\$\$ AT SCALE



TEAM PRODUCTIVITY



INTEGRATION WITH
TOOLING

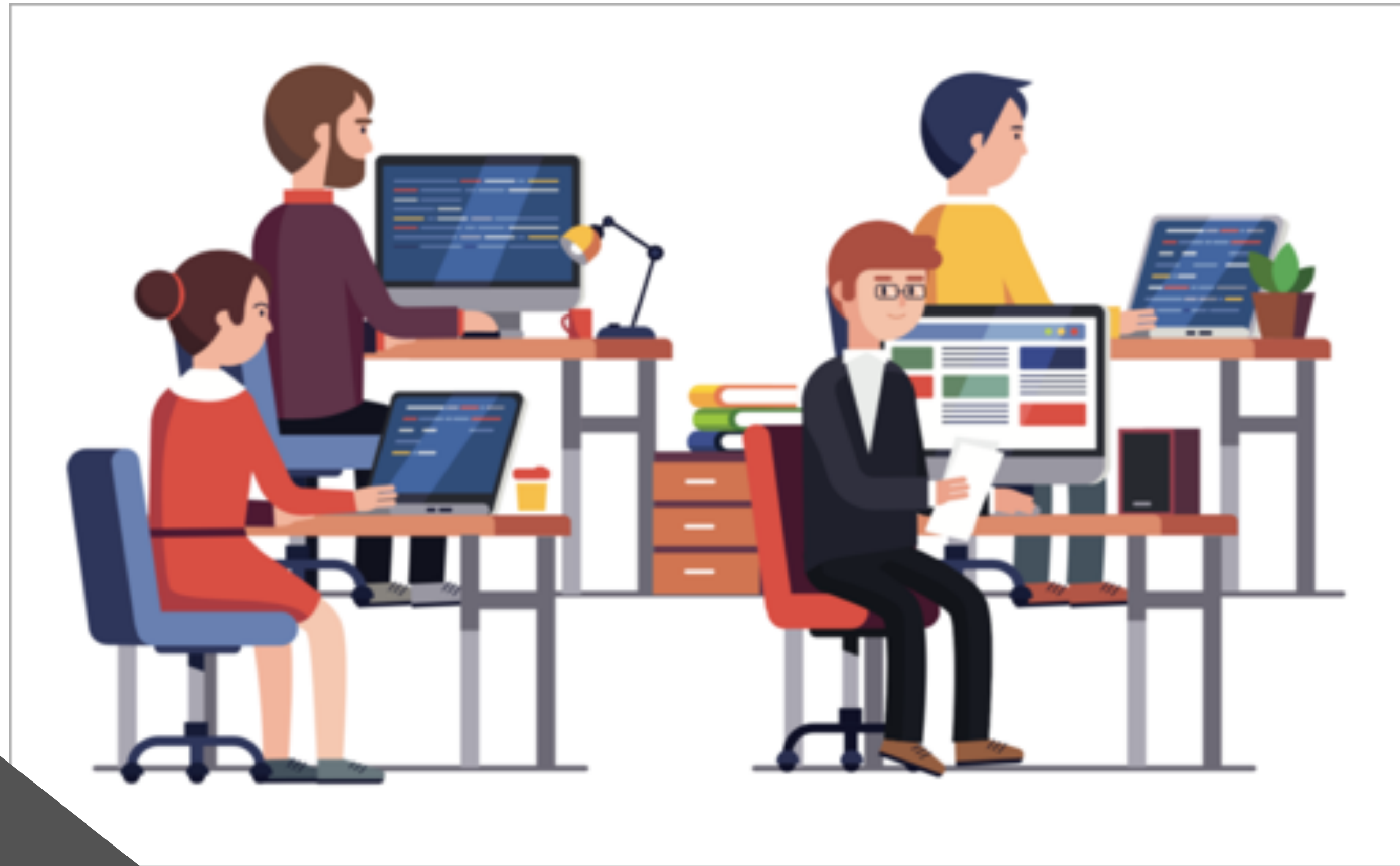
Studio
lessons learned.

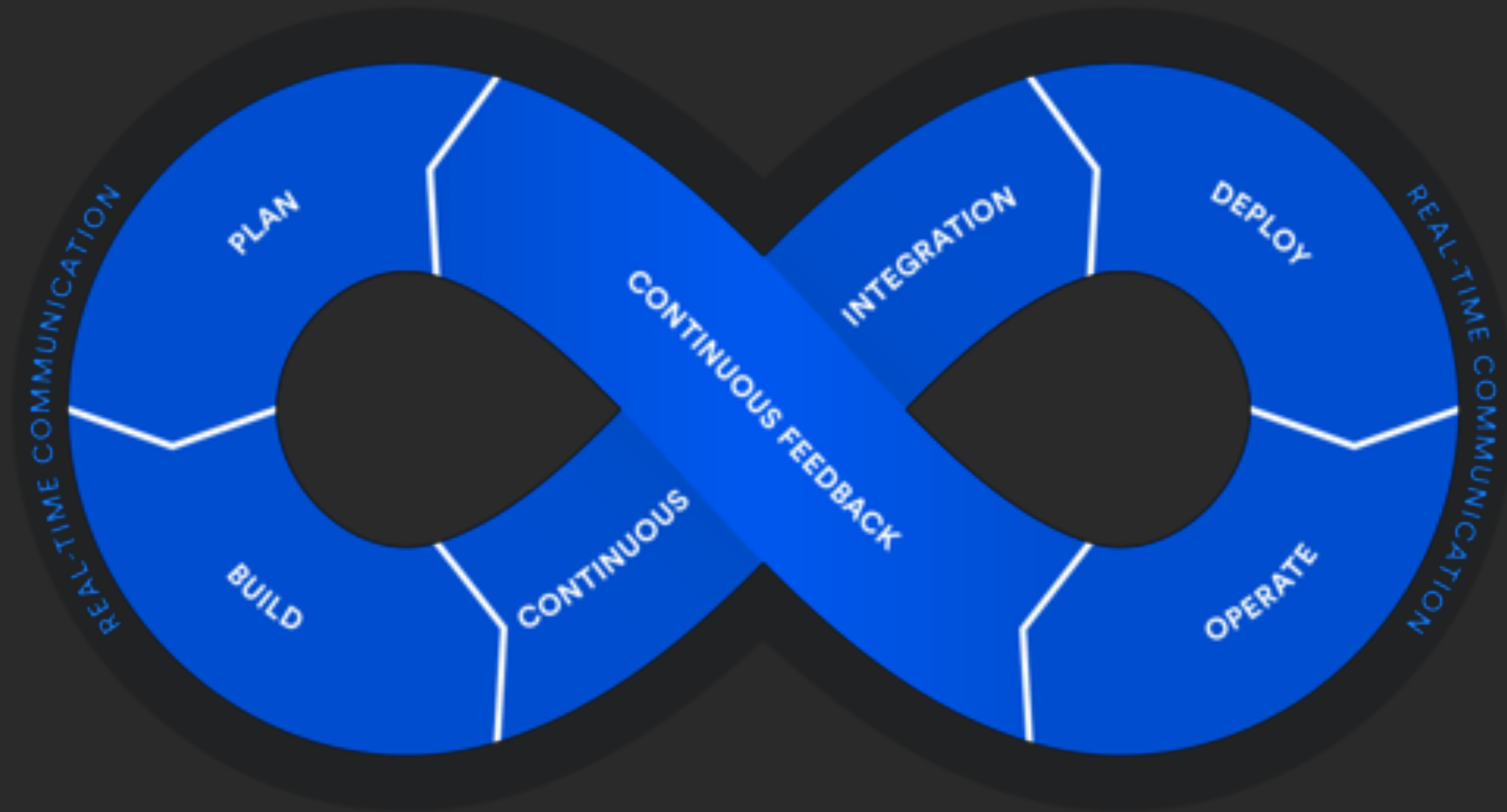
The 3D Engine doesn't
solve DevOps.

Building
Games is
Complex.
Ensure you
can
collaborate.



Ensure
Team buy-in (Art too)



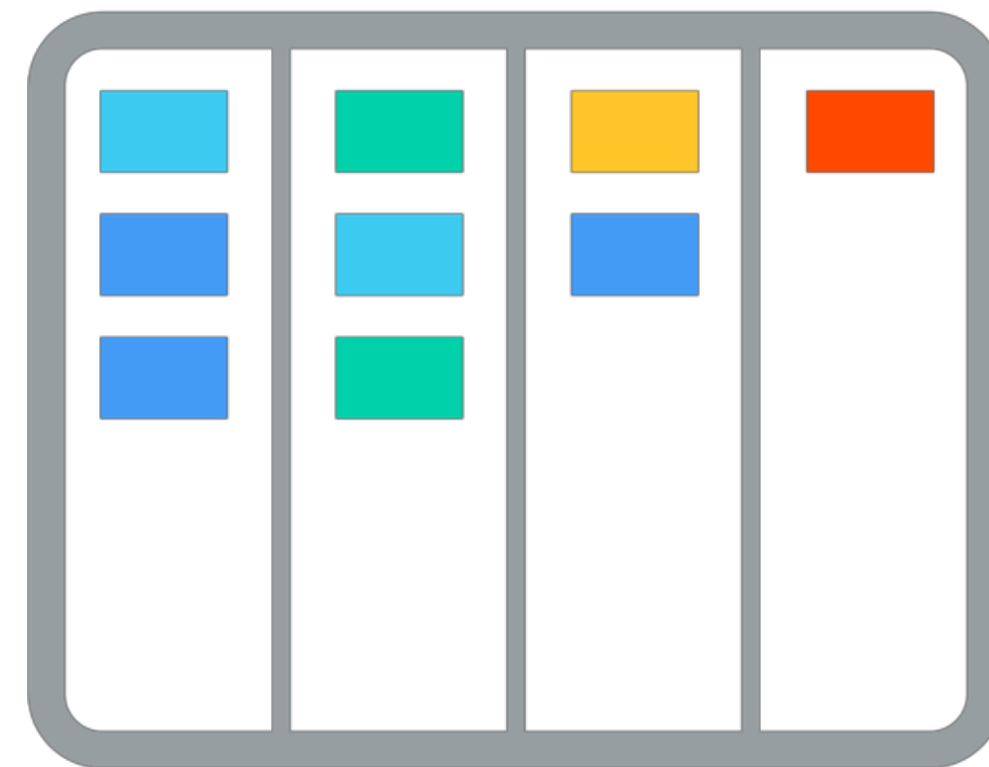
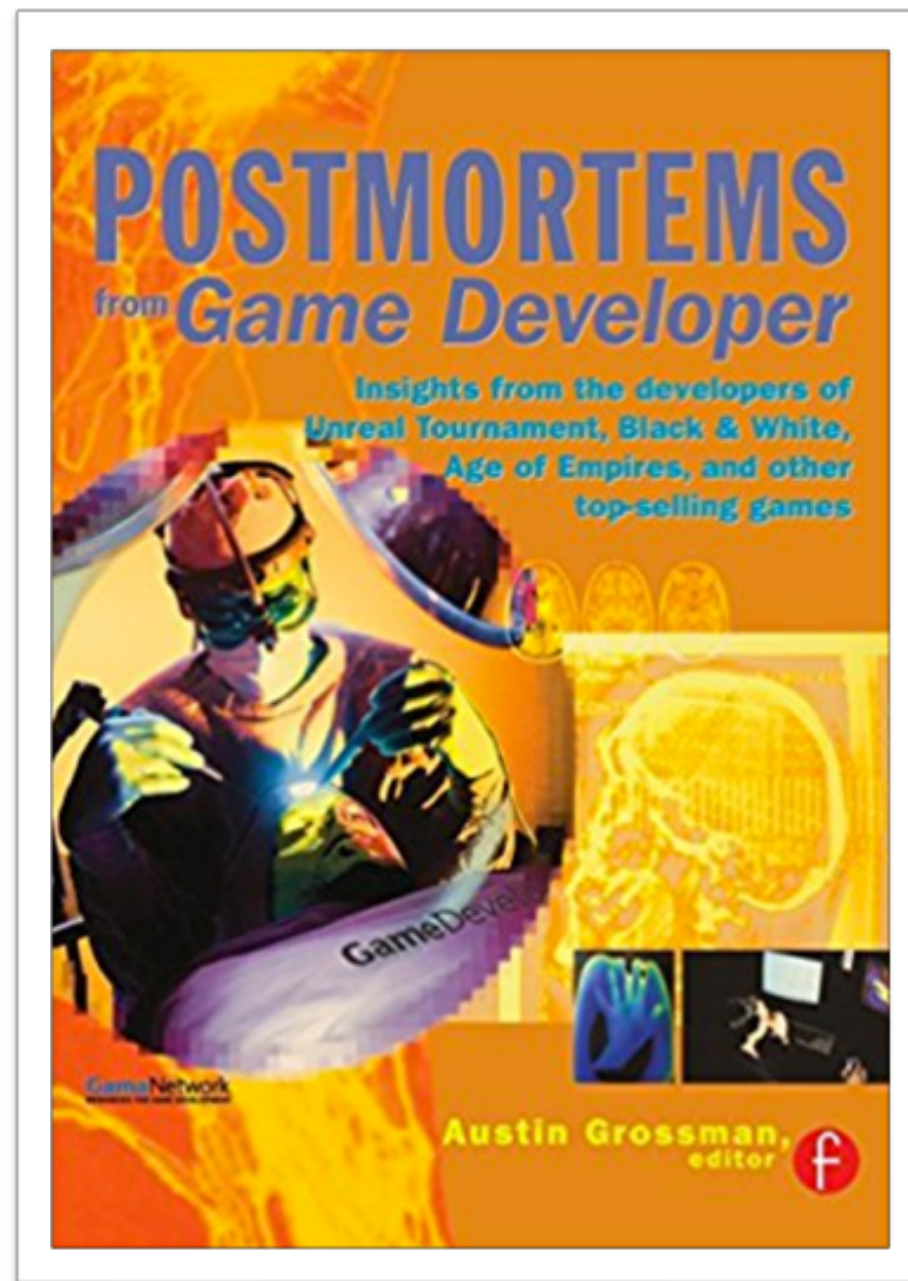


Consider DevOps methodologies.



Branching or Locking, both?













The Best studios manage backlogs.



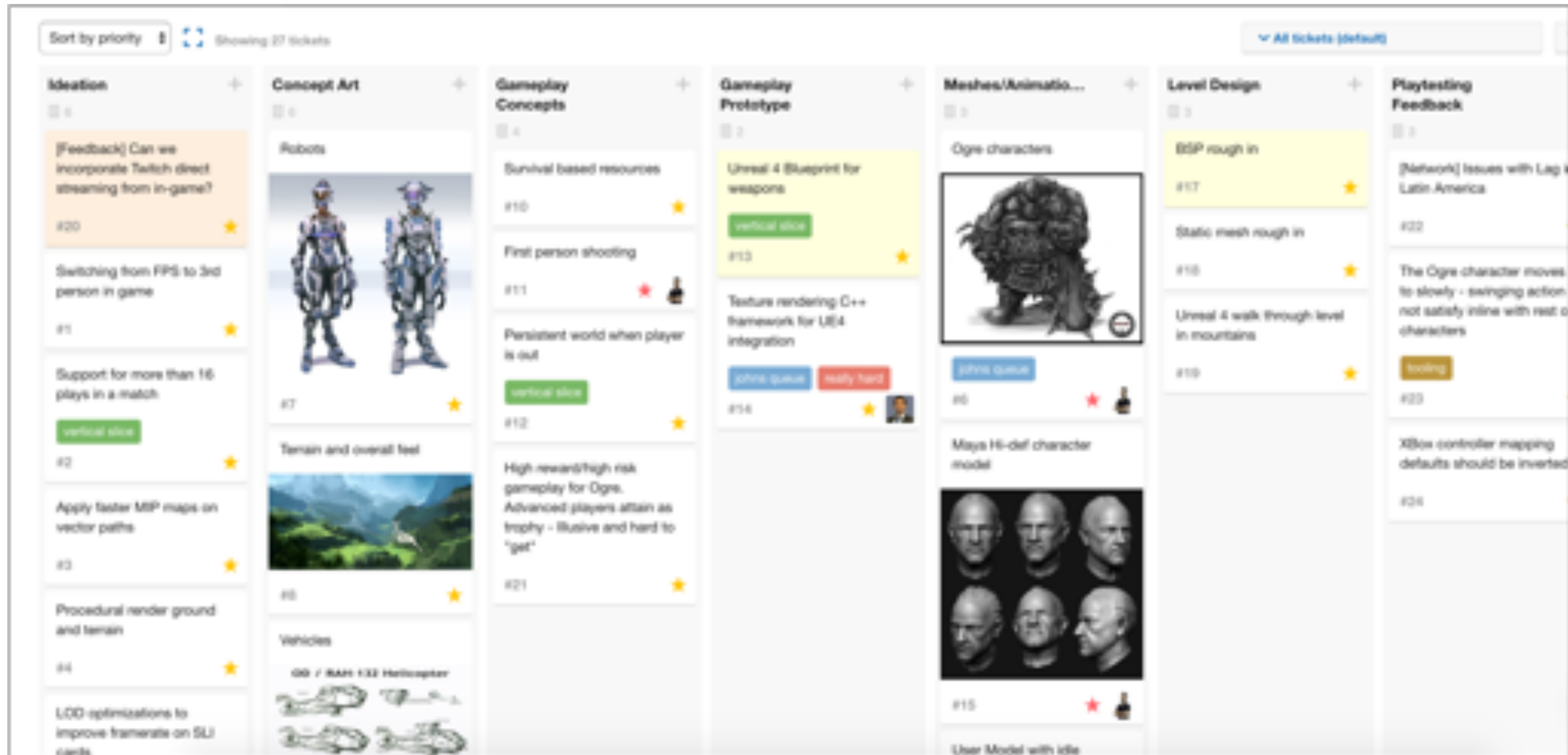
Use what aligns with your culture

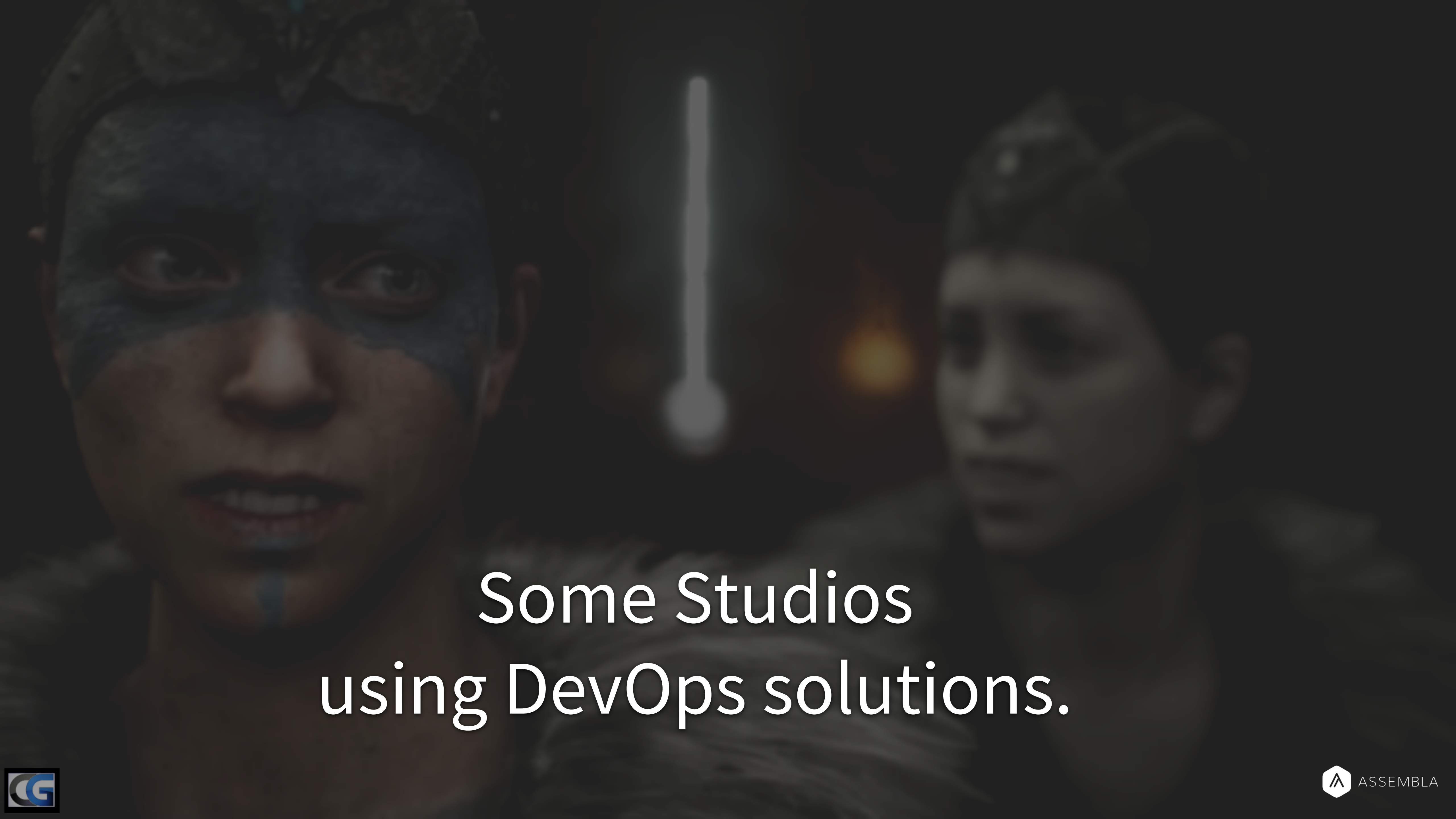


Tracking all the details matters

▼  Art Assets 2015-06-01 - 2015-07-10		 In progress	1332h		
▶ User allocations Click here to allocate users to this sprint					
▶ Burndown chart					
▼ Sprint backlog items					
▼ Characters		 In progress	357h		
▼  Playable: Main Character		 In progress	36h	 Very high priority	 Character Pipeline: UVs 3 of 7
Concept	Artist Jeff	✓ Completed	0h		
▼ LOD		✓ Completed			
High Resolution	Artist Rick	✓ Completed	0h		
Low resolution	Artist Tom	✓ Completed	0h		
UVs	Designer Olga	 In progress	6h		
Rigging	Artist Rick	⊖ Not done	8h		
Textures	Artist Tom	⊖ Not done	16h		
Final Pass	Art Director Bob	 In Development / ⊖ Not done	6h		 AD Signoff / In Development
▶  Playable: Party member 2		✓ Completed			 Character Pipeline: 7 of 7 tasks

But start simple





Some Studios
using DevOps solutions.



“

“My team is global. What he had in place before was a DIY file transfer nightmare. The upload speed was an issue and ultimately having our own cloud Perforce solution was not sustainable. We were looking to have a solution in place on a fairly quick timeline, and our partner helped us get up and running quickly.”



SUMO DIGITAL

- Founded in 2003
- Licensed developer across all Microsoft, Sony and Nintendo gaming platforms
- Expertise in developing and growing licensed IP
- Always on the cutting edge

STUDIOS



- **SHEFFIELD**

- Founded in 2003
300+ Staff



- **PUNE, INDIA**

- Founded in 2007
80+ Staff



- **NOTTINGHAM**

- Founded in 2016
70+ Staff



- **NEWCASTLE**

- Founded in 2018
35+ Staff



- **THE CHINESE ROOM, BRIGHTON**

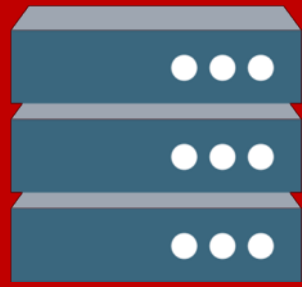
- Acquired in 2018

KEY TITLES

Over 60 titles released to date... and many more on the way!



PERFORCE USAGE STATISTICS



SERVERS

- 23 Servers
- Server (p4d)
- Proxy (p4p)
- Connection Broker (p4b)
 - Windows
 - Linux



DEPOTS

- 45TB Total
- 500+ Users
- \approx 10 Active Projects
- Commit Edge / Replicas (UK)
- Proxies (India)



PROJECT STATS

- 4.2TB Total Size
 - 2.2TB Art
- 0.16TB Source
- 0.6TB Binaries
 - 0.6TB Build
- 0.5TB Characters
- 0.09TB Documents
- 0.05TB Audio

**61,717,289 lines of
code, in 112,550
source files**

Come talk Game Dev

At our Happy hour at 8pm at Amber Seattle.

Come talk to us at Booth #16.

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