

MINIBEAST

HEROES

What did we make?

Minibeast Heroes is a **series of short, animated explainers for lower primary school students about insects and their role in the environment.**

Produced by ABC Research & Development with ABC Education, the project was created **using emerging visual production tools**, and delivered multiple content outputs for a range of digital platforms.



Production output = multiple deliverables + destinations

**Animation
explainer
videos**

x 6 episodes
(2 min 30 secs each)

x 1 supercut
(15 mins)



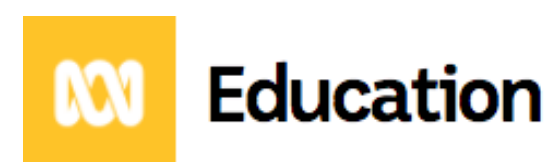
**HTML5
Rotatable bugs**
(for desktop + mobile)

x 3



**Teacher
toolkits**
(inc. ABC Archives
content)

x 6



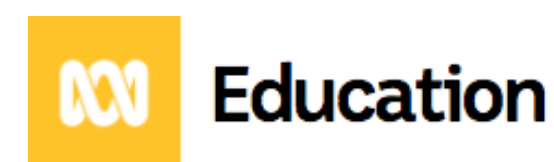
**'Making of'
video**

x 1



**360 video
teaser**

x 1



**Room-scale
VR for public
spaces**

x 1



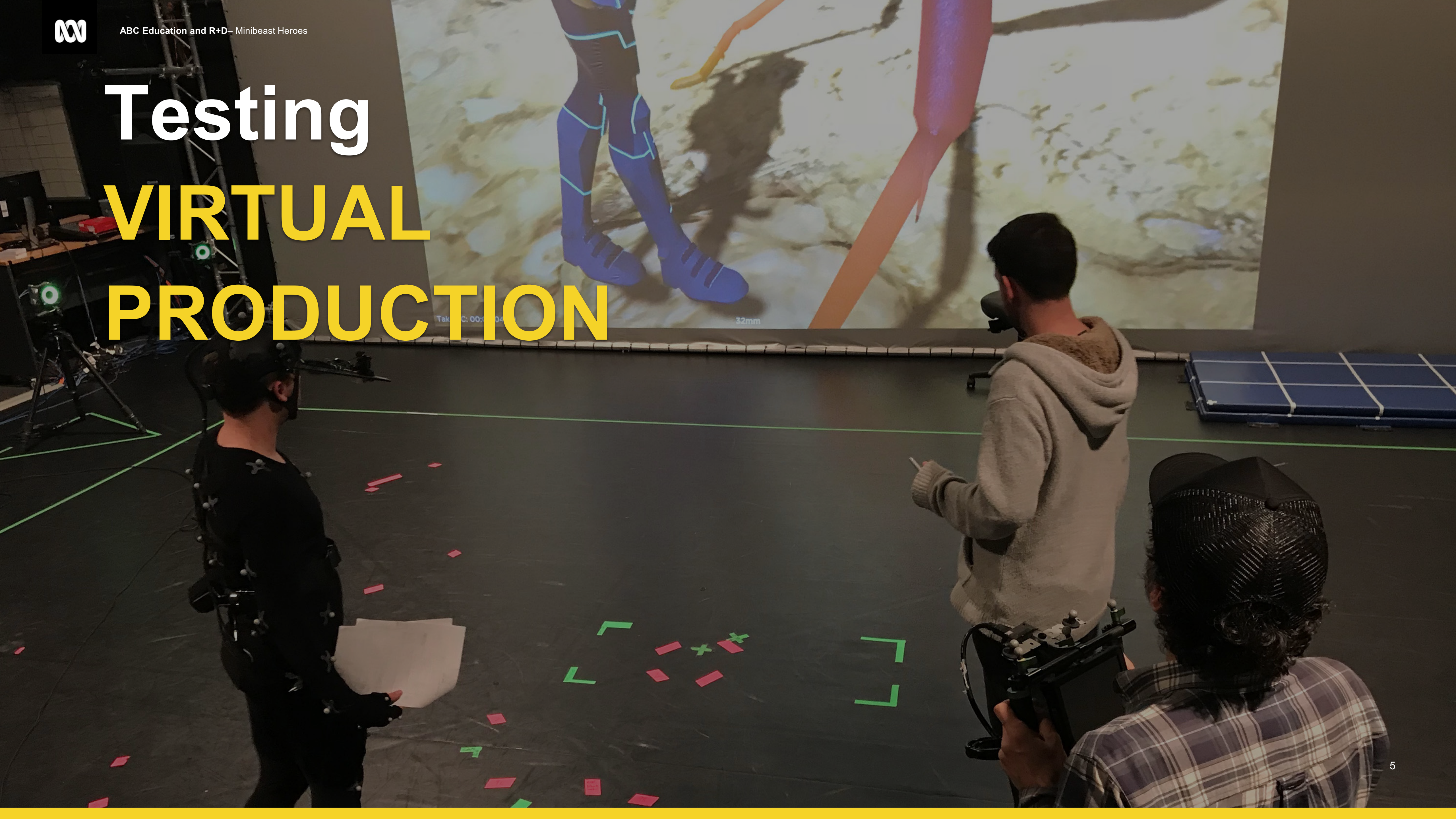
**AR
experiments**

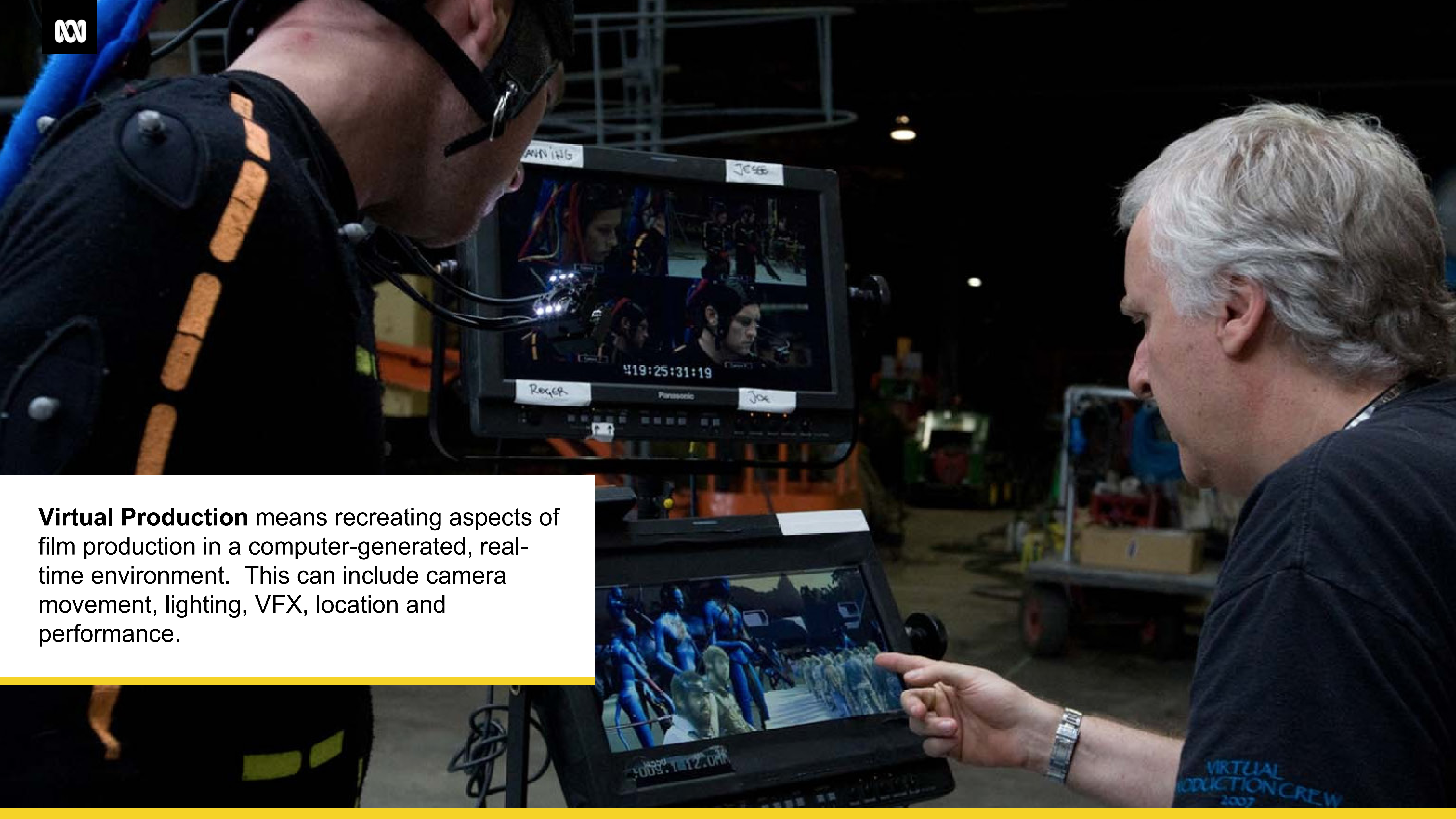
x 2





Testing VIRTUAL PRODUCTION





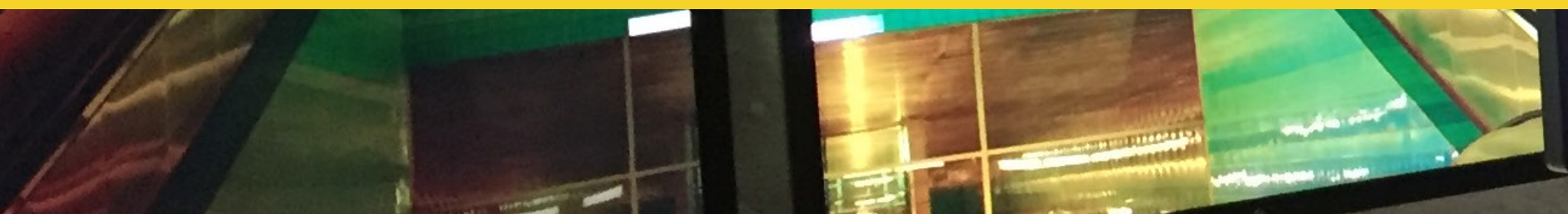
Virtual Production means recreating aspects of film production in a computer-generated, real-time environment. This can include camera movement, lighting, VFX, location and performance.

VIRTUAL
PRODUCTION CREW
2007



THE PRODUCTION IS ALL VIRTUAL

Because all of the visual story elements are together in the game engine (i.e. Unity or Unreal), the virtual production team can instantly change camera settings, lighting and visual effects for a scene between takes (and later in post).



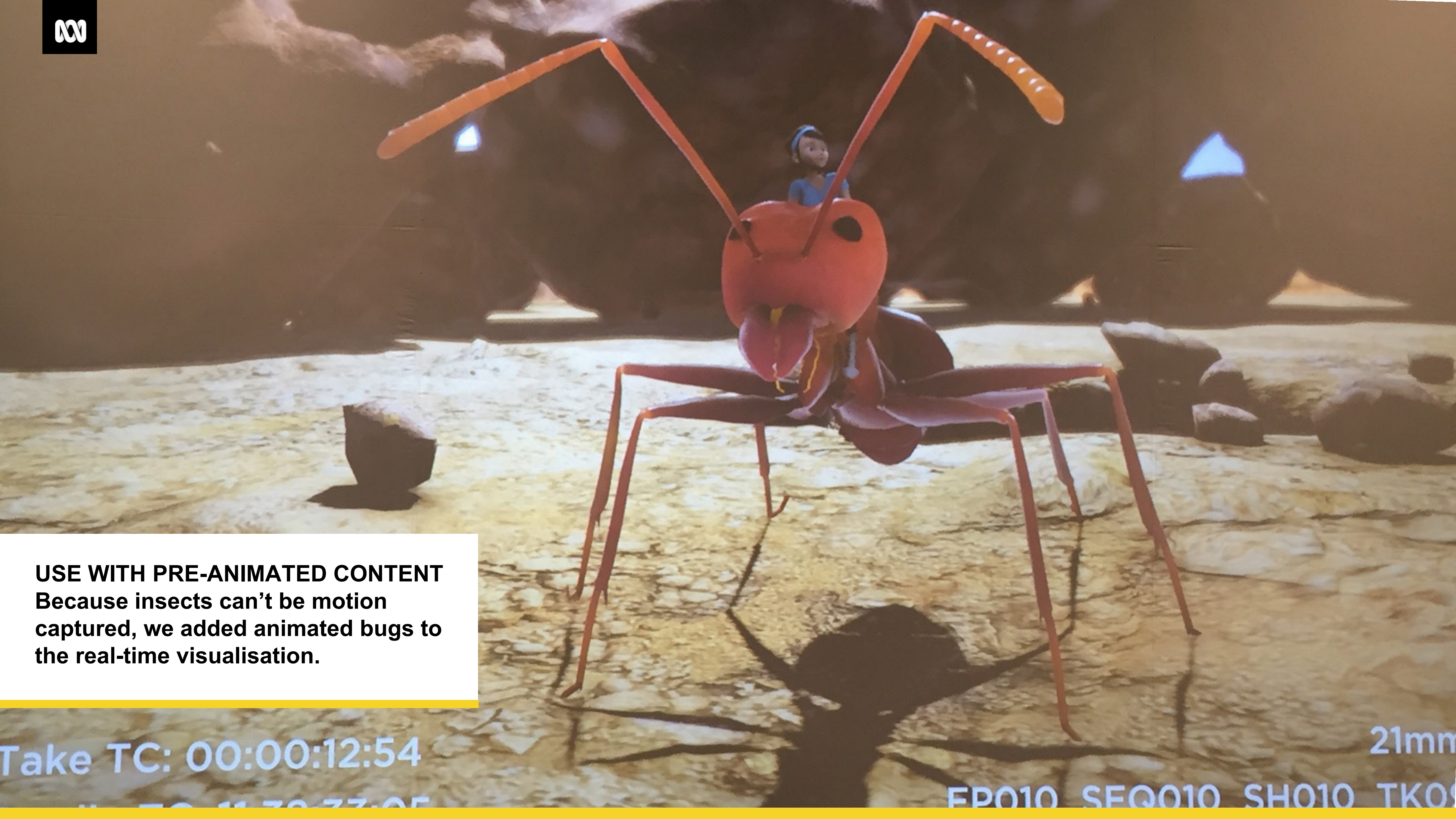


DEAKIN VIRTUAL
PRODUCTION STUDIO

Carl's movement data was live-mapped to a 3D character.

09:37:41:16

65mm
EPO20 SEQ010 SH210 TK01



USE WITH PRE-ANIMATED CONTENT
Because insects can't be motion captured, we added animated bugs to the real-time visualisation.

Take TC: 00:00:12:54

21mm

EP010 SEQ010 SH010 TK00

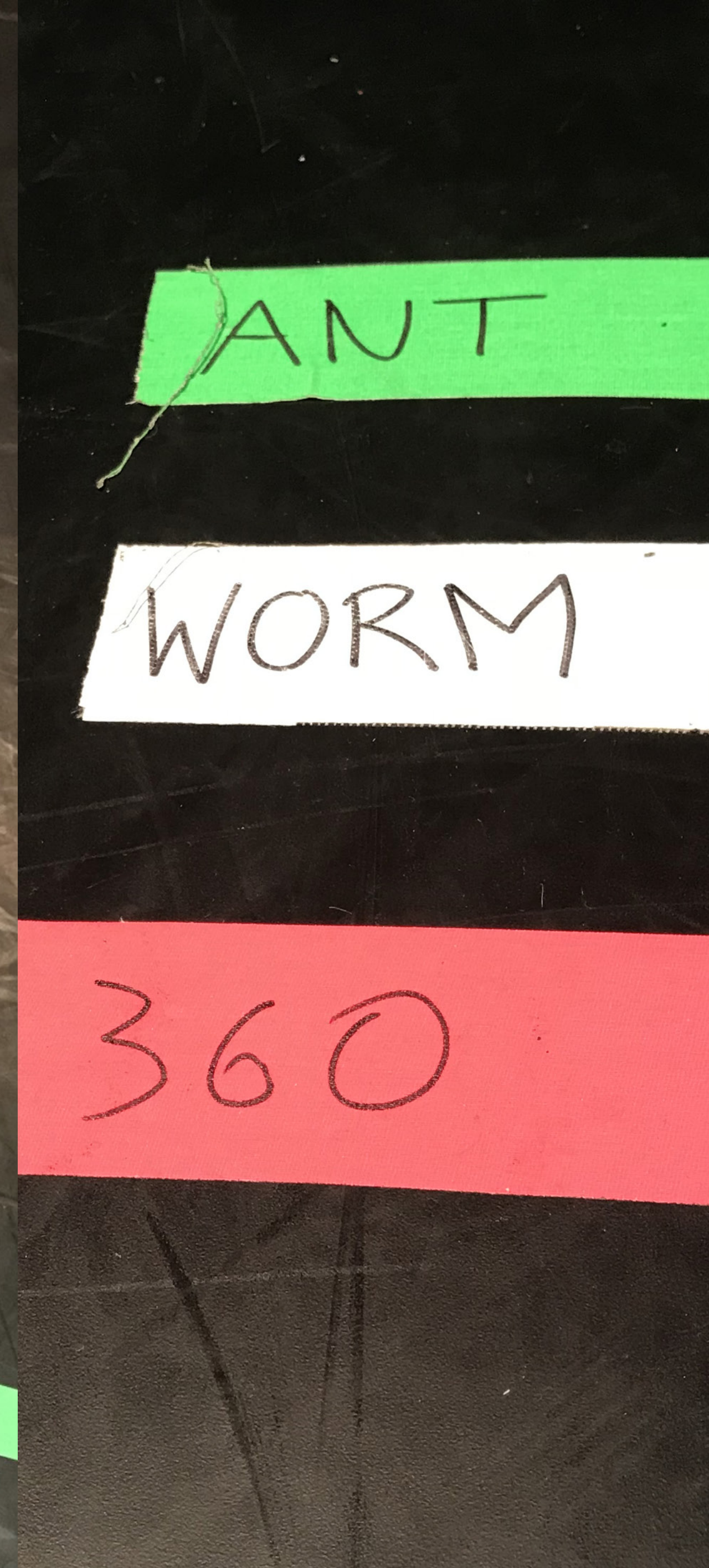
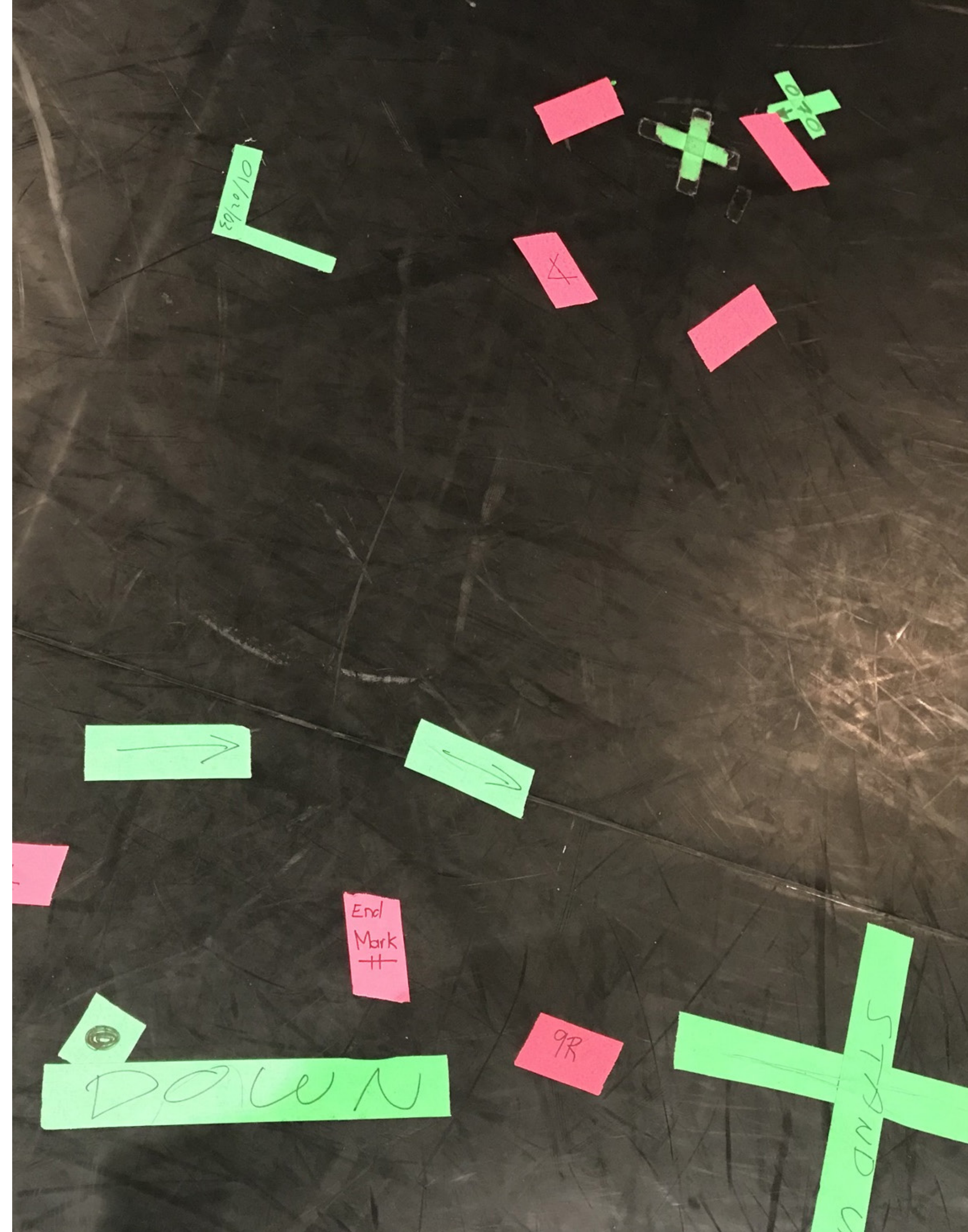


TOP TAKEAWAYS

CREATIVE FREEDOM

Storytelling is spatial — your 3D environments will be created to work in the game engine in 360 degrees.

You have the option to map out the performance in the studio with floor maps, and then create a shot list.





Testing PHOTOGRAMMERTY



WHAT WE DID

We sourced insects for us and then took over 8000 macro photographs of each one from every angle.

Next, they tried using photogrammetry software to generate 3D models of the bugs.





**Macro photos of our original
European Honey Bee**



The **photogrammetry** software worked better for some bugs than others (the shiny ones worked best!)



Blue Banded Bee
(smooth fur, not fluffy)



European Honey Bee
(very furry = nightmare!)



To counter this, Pixelcase used a hybrid process that combined photogrammetry data with textures made by a 3D artist (based on their reference macro photos of the bee).

THINGS PHOTOGRAMMETRY IS GREAT FOR

REALISM

It copies real things. It's especially good for objects with hard, shiny surfaces.

It's also great for creating realistic 3D environments for immersive experiences.





**Final render of our
European Honey Bee**



LADYBIRD



ANT



BEE



European Honey Bee interactive for ABC Education



Drag and zoom me!

HOTSPOTS ON/OFF

RESET BUG

VIEW FULLSCREEN



Minibeasts To The Max
room-scale VR

Skills and Knowledge in an age of STEM and a 'New Work Reality'.


Report: FYA, The New Work Reality

The New Work Reality



Source: FYA, The New Work Reality, https://www.fya.org.au/wp-content/uploads/2018/06/FYA_TheNewWorkReality_sml.pdf





To ensure young Australians are prepared and equipped with the skills and capabilities required to successfully navigate their futures there is an urgent need to:

*Encourage young people to choose pathways that will equip them with **enterprise skills** that are portable to many jobs in their future which are key to successful transitions*

What are 'Enterprise Skills'?

Glossary



Enterprise skills - Enterprise skills are transferable skills such as problem solving, communication, teamwork, and creativity.



Technical skills - Technical skills are often specific to a particular task, role or industry and can include qualifications such as licenses or certifications.

Source: FYA, The New Work Reality, https://www.fya.org.au/wp-content/uploads/2018/06/FYA_TheNewWorkReality_sml.pdf

A Challenge: 'soft' skills cannot be developed without content knowledge



Saturday Extra

Too much talk not enough content

▶ Listen now | ⬇ Download audio

Saturday 28 July 2018 7:40AM [\(view full episode\)](#)

Australia's chief scientist Dr Alan Finkel argues the case for teaching content over life skills.

He says there's an imbalance in the education system that's weighted towards the softer skills and it's failing to equip our students for the twenty-first century.

The risk, he says, is a workforce that talks more but knows less.



IMAGE: A CLASS IN ARTIFICIAL INTELLIGENCE, TECHNOLOGY AND INNOVATION BEING HELD IN A SCHOOL SCIENCE LABORATORY. (GETTY IMAGES)



Saturdays 7.30am
Repeated: Monday 7.30pm with Extra
Presented by **Geraldine Doogue**

IN THIS PROGRAM

Nicaragua crisis; Alan Finkel on education; Media merger and Macquarie Bank leader change; A Foreign Affair; How to plan a 'good death' - Saturday 28 July 2018

▶ Listen | ⬇ Download

Nicaragua in crisis
7:30 AM

The much talked about content



Work & careers
aside, what would
we hope all citizens
of the world should
be able to do?

Literate and numerate so that everyone has an opportunity to participate and understand life in everyday society, wherever that may be.

Citizens who can make informed decisions for themselves using critical skills of analysis.

Citizens to be active, critical thinkers, readers and consumers of media and information made available to them in this information saturated world.

Thank you.

The logo for ABC Education, featuring the ABC logo (three interlocking circles) followed by the word "Education" in a bold, sans-serif font.

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