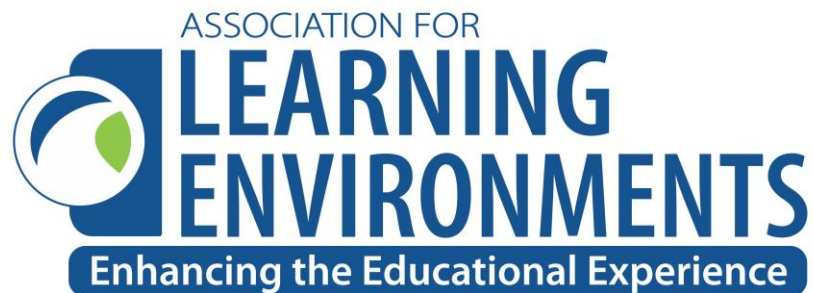


Make It Real . . .

Utilizing Building Information Modeling and 3-D Virtual Reality Visualization to Improve and Enhance the School Design Experience



Introductions

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President, StudioJAED Architects, Engineers, Facilities Solutions

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Facilities Planner, StudioJAED Architects, Engineers, Facilities Solutions

Objectives

How BIM and VR can improve the design process

Capabilities of VR technology in ed. planning

How VR can provide invaluable assistance

Experience VR tools in action

A decorative horizontal bar at the bottom of the slide, consisting of a dark blue upper section and a light green lower section.

Challenges

Communicating to decision makers

Early budget/design reconciliation

Understanding client expectations

Client's understanding of the design

Proactive engagement



Eras of Design

Designing with newfound 3D spatial awareness

Virtual Reality in the Classroom

Deepens the design discourse

Virtual Reality in the Classroom

Engage stakeholders more than in the past

Educator Engagement

Current modes to engage the Educator is limited

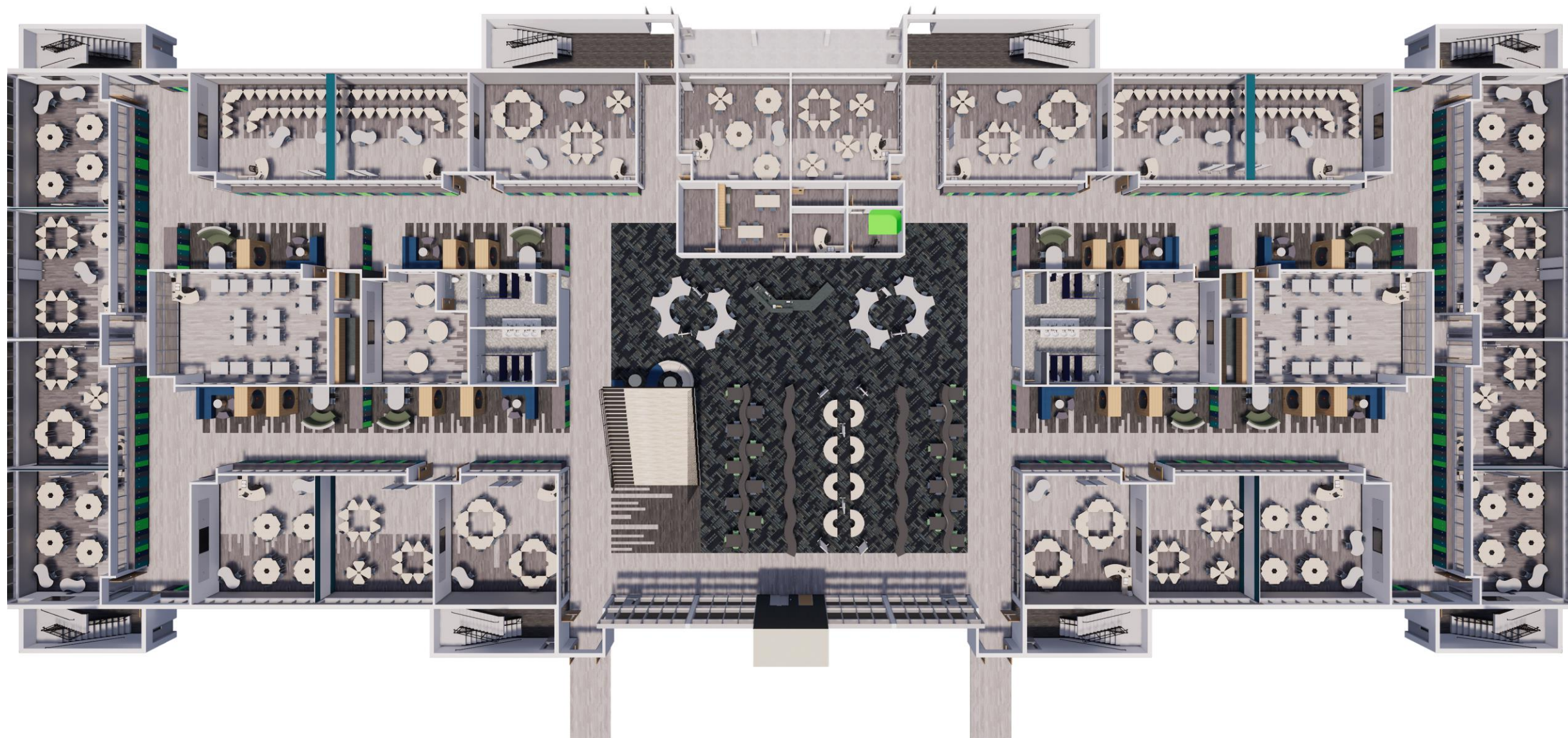
Floor Plans

Furniture Plans

Interior Elevations

Renderings













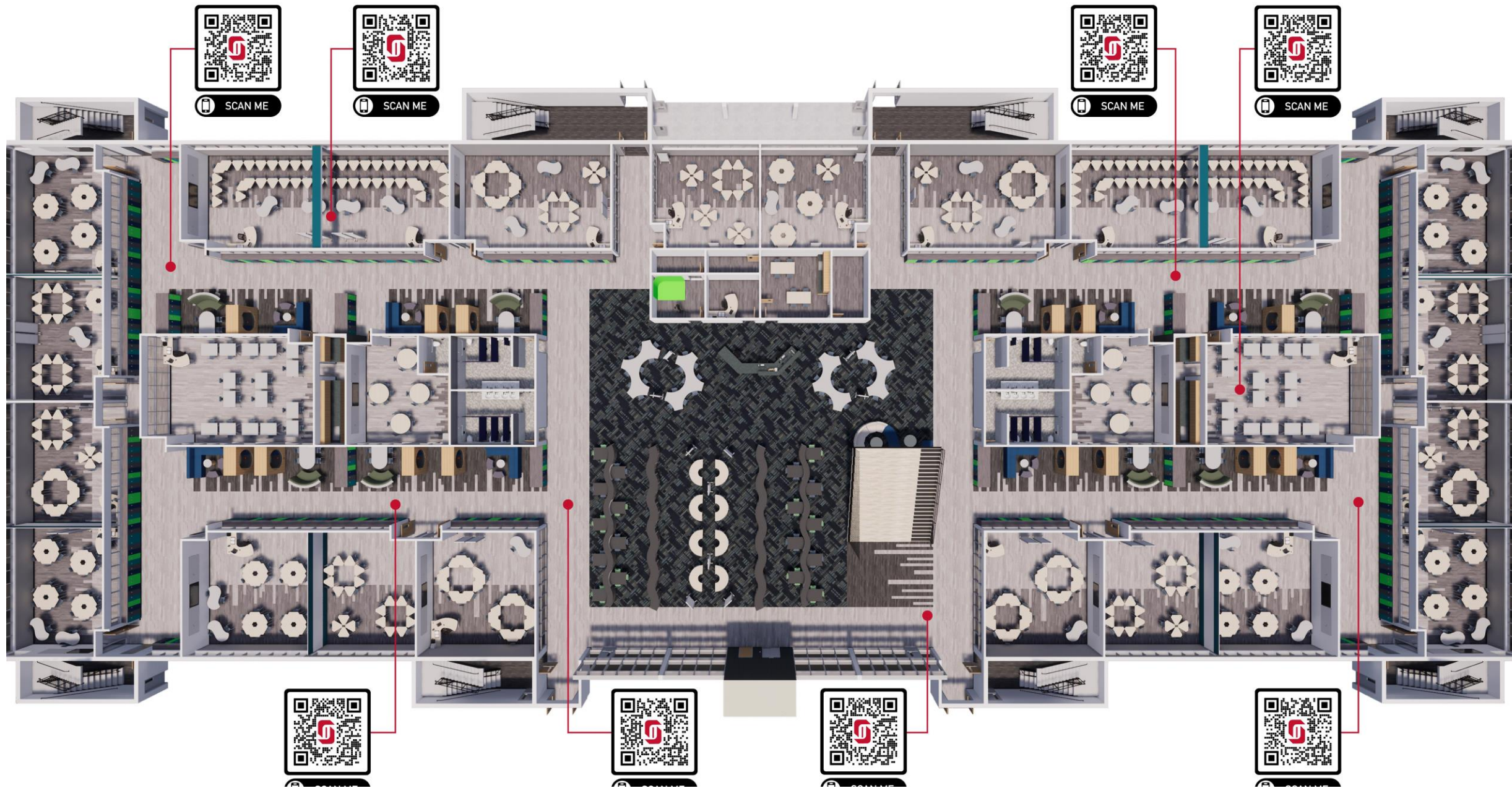








SCAN ME



Human Computer Interaction

HCI enables users to achieve a goal easily and effectively

Exploration in ways which would be difficult

There is much more time for experimentation

Human Computer Interaction

Impart Knowledge & Information

Ideal Way Of Engaging

Design Process Incorporation

Explore Multiple Concepts

Retinal Experience

Physical & psychological impact of perception is very complex



Rendering or Real

Photorealistic renderings of spaces that don't even exist yet



Educator Engagement

Deeper Design Discourse

Broad Engagement

Explore

Complimentary Aid

Students respond to computer generated learning better than traditional methods

Educators engage more within an immersive environment

Complimentary Aid

Productivity Tool

Streamline Communication

Save Time

Better Decisions

Complimentary Aid

Newfound three dimensional spatial awareness

VR brings together parties in a new & exciting way

Experience can be incorporated into the process

Broadly engage stakeholders more than before

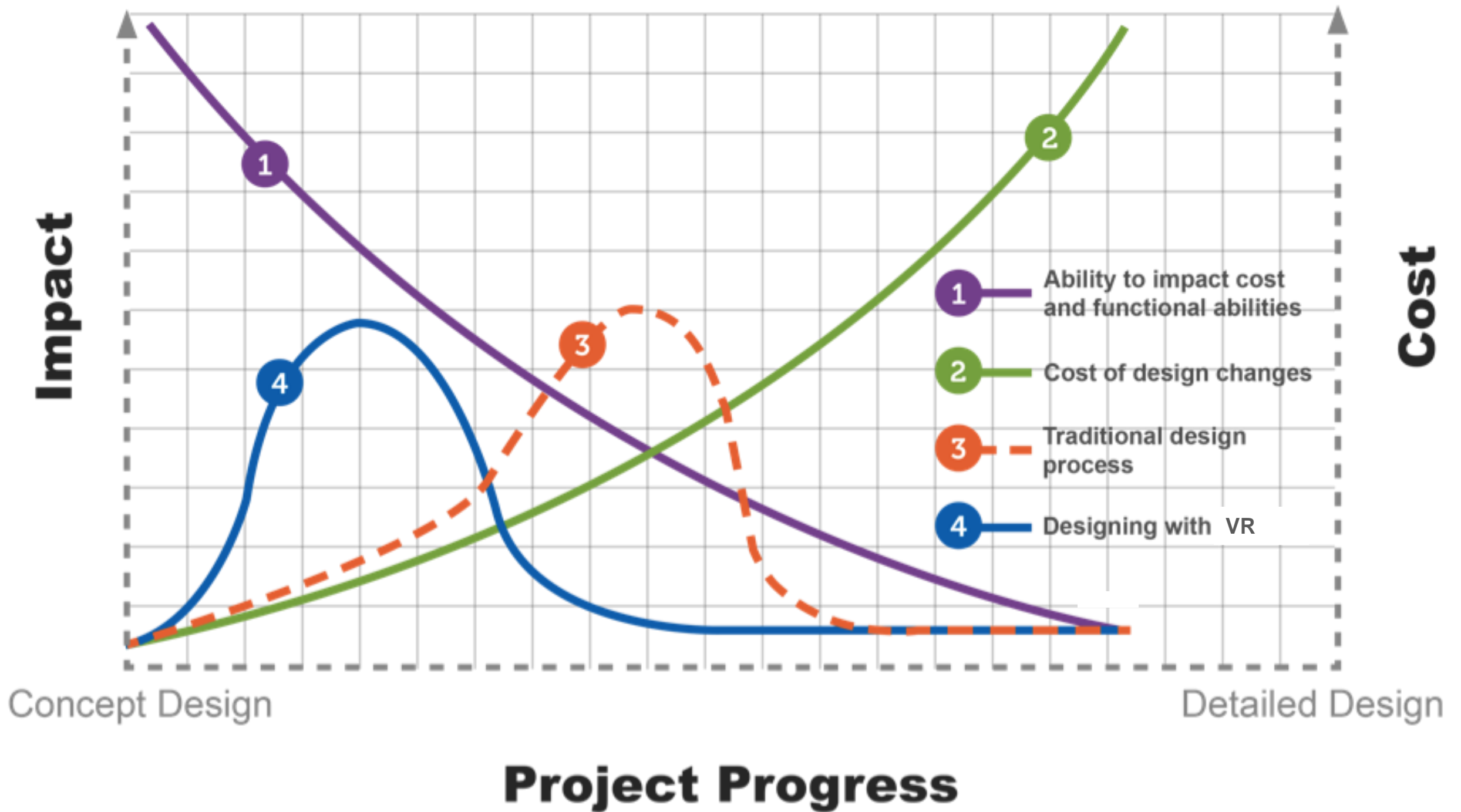
Facilities Engagement

Ability to change and grow depending upon decisions

Continues to increase ones understanding

Generate a greater understanding of them

Feedback transforms ability to create spaces



Empower The Educator On Demand

Change Finishes

Change Color Schemes

Move Furniture

Walk Through

Seeing The Changes







Implementation

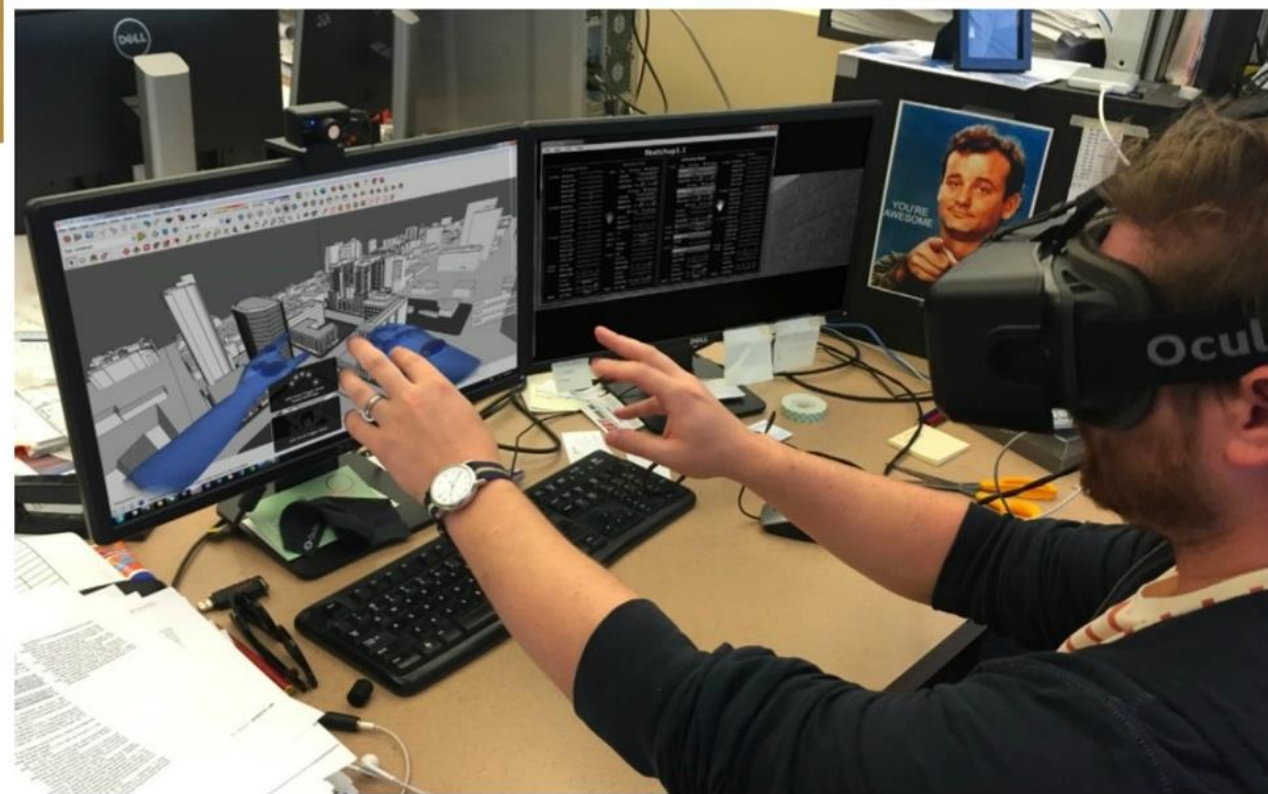
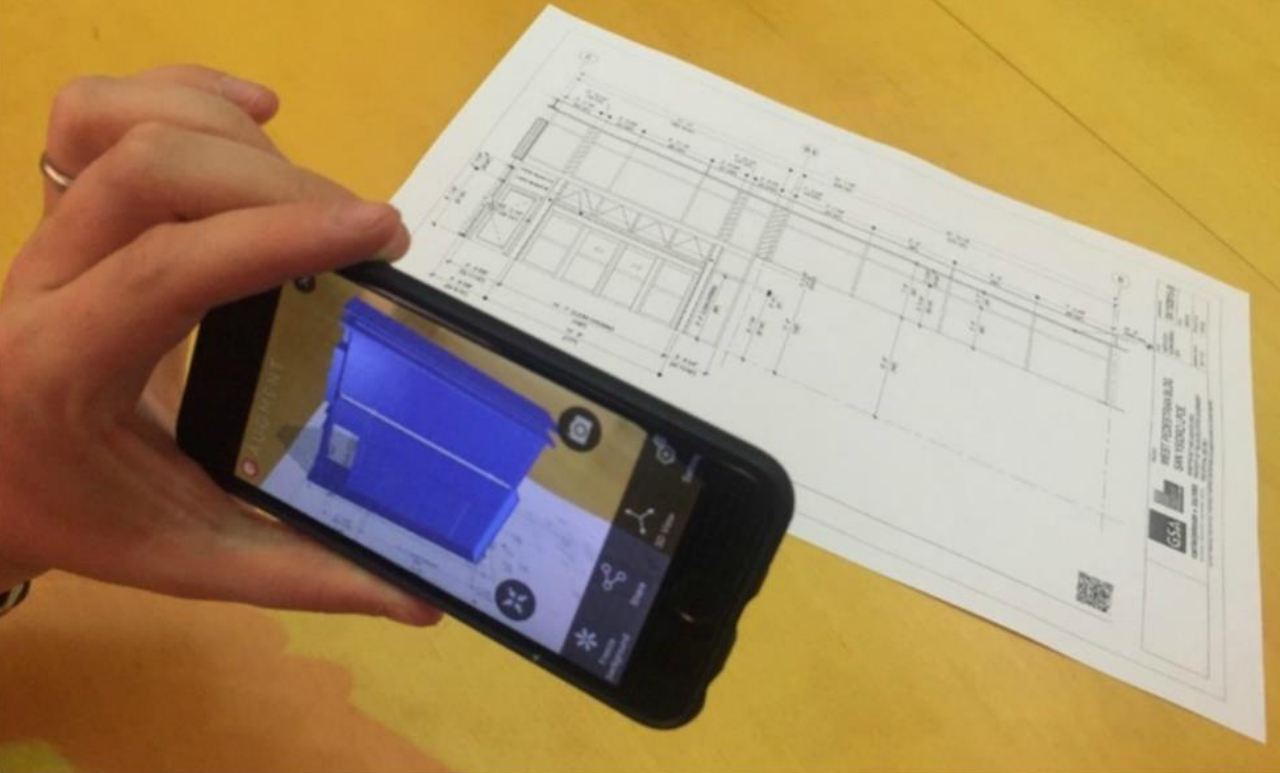
Custom individual experience

Low cost

Mobile

No replacement for face time

Curriculum influence



Real World Scenarios

Pre Construction

Simulate Fire Drills

Active Shooter Training

Supervision & Sight Lines

Wayfinding

VR Fast Facts

Integral with BIM

High computing power

Touring is a two person operation

20 Minutes in the virtual world

Seated position on swivel chair



Various VR Methods & Software Exist

REVIT

Sketchup

Fuzor

Enscape

Lumion

Momento360

Caution

Detailed to derail



Some VR Benefits

Early decisions

Better budgets

More stakeholder buy-in

High level of design confidence

Encourages design commitment

Future of VR in Planning & Design

Shift from getting to doing

Pushed down to all disciplines

Show me how to...

Low cost....high impact

Mobile platform to holodeck problem solving

Why?

BECAUSE 2D PLANS ARE LIMITING

WE USE VR TO EXPAND CREATIVE OPPORTUNITY

BECAUSE HIGH LEVEL ENGAGEMENT IS SOMETIMES SCARCE

WE USE VR TO SOLICIT INSTANT FEEDBACK

BECAUSE PEOPLE OFTEN DEMAND INSTANT GRATIFICATION

WE USE VR TO CREATE A REAL IMMERSIVE ENVIRONMENT

BECAUSE PEOPLE NEED TO BE PART OF THE SOLUTION

WE USE VR TO EXPAND THE REACH OF THOSE NOT NORMALLY ENGAGED

QUESTIONS?