

Training Tomorrow's Disaster
Mitigation and Flood Insurance
Workforce and Partners with Virtual
Reality Technology

**ASFPM 2018 National
Conference**

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1

*What is VR
&
How Can I Experience
it?*

What is Virtual Reality (VR) and its Related Technologies?

Virtual Reality: Generates highly realistic images and sounds that transport users to *alternative settings*. In this computer-generated simulation of a 3D image or environment, users are immersed in their own “virtual reality” where they can interact with the simulation in realistic ways.



Augmented Reality (AR):

Provides an experience based on the user’s *actual environment*, amplified by computer-generated sensory input, such as sound, video, graphics or location data.



Mixed Reality (MR):

A super set of AR. Mixed reality adds digital objects to physical ones, anchoring them to points in the real world. Users can then perceive physical and digital objects in the same space.

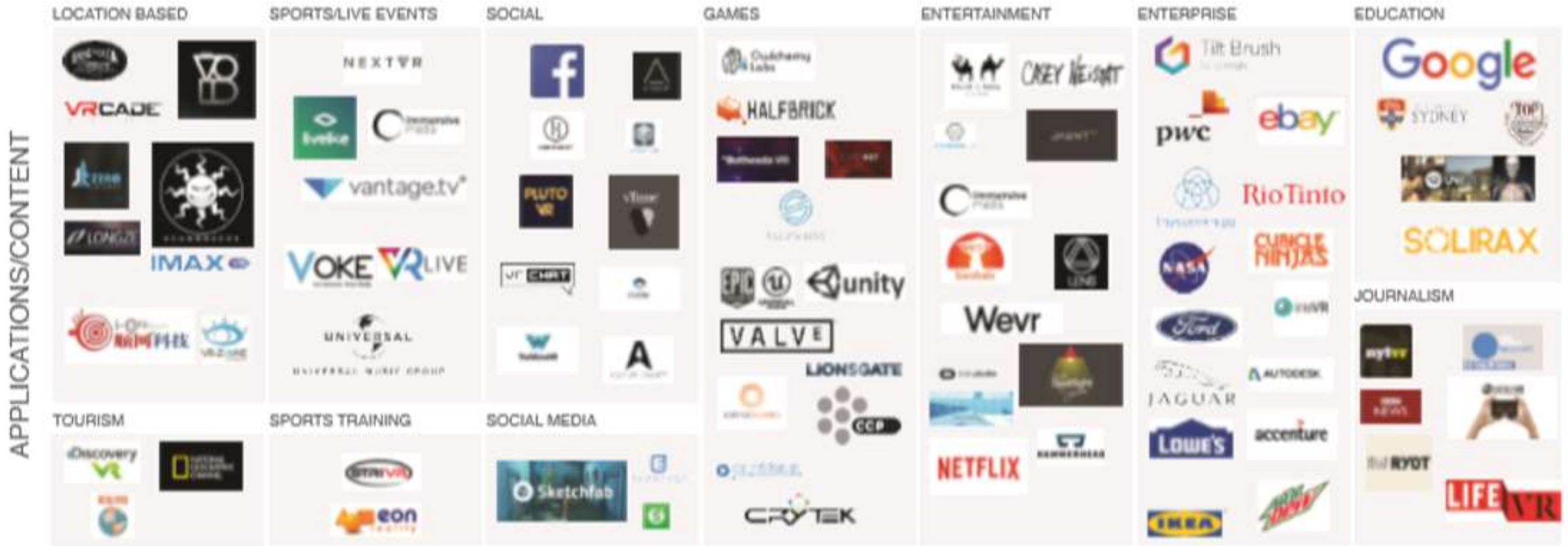


Extended Reality (XR):

Allow humans to direct devices through separate physical spaces in real time (i.e. drones, remote undersea explorations crafts, or using surgical robots).

Which Industries Benefit from VR?

The VR Landscape:



How is Virtual Reality Benefiting Businesses Today?



Talent Transformation

VR is an immersive substitute to real-world training which can be costly, hazardous, or otherwise difficult, providing staff opportunities to gain experience.



Enables New Business Models

VR allows businesses to create customized experiences for customers which will help them experience the product in an intimate way before buying.



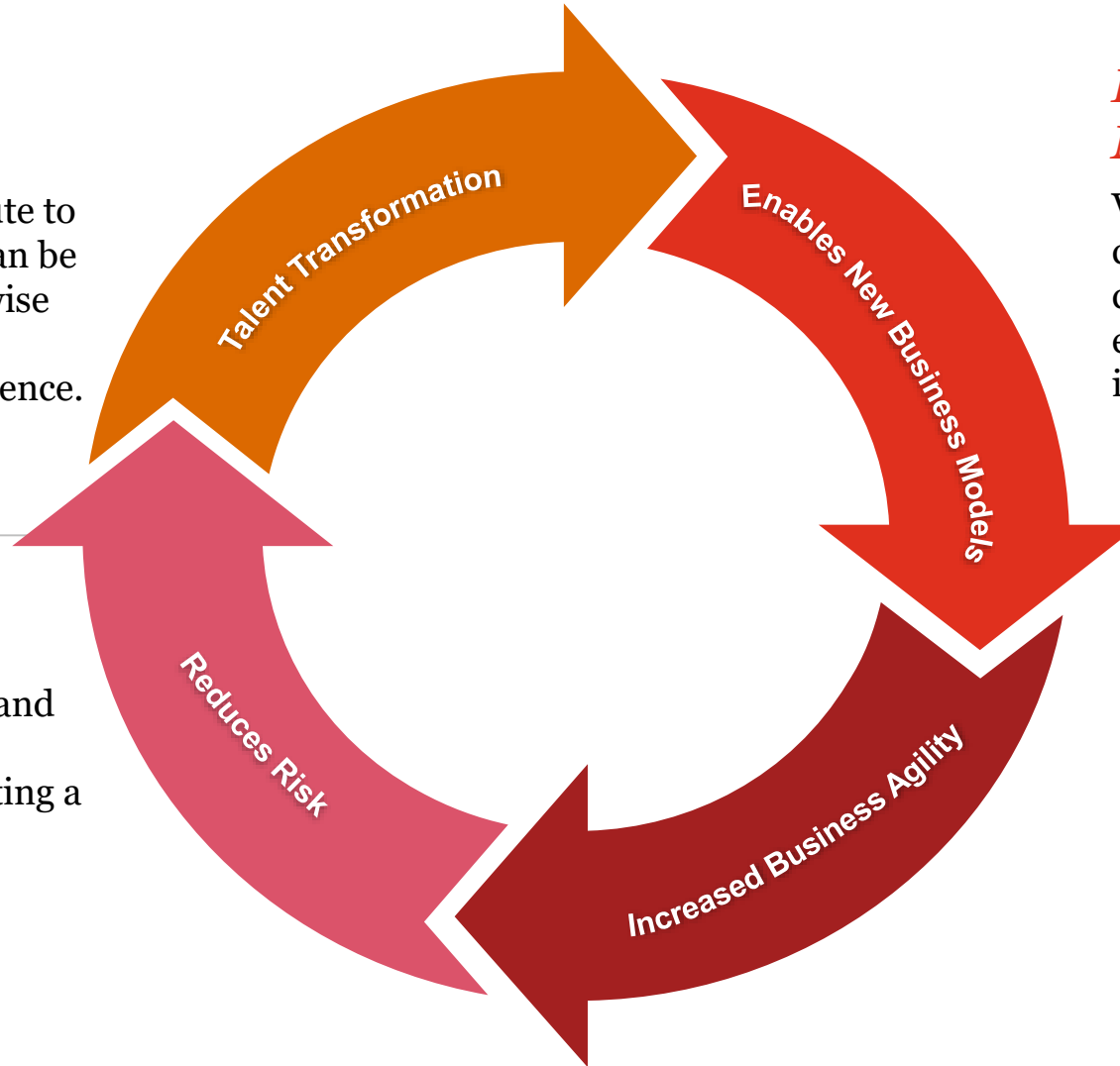
Increase Business Agility

VR technologies allows businesses to quickly design and create new scenarios which allow them to experiment and learn more quickly.



Reduces Risk

VR allows users to design and prototype products or solutions, before constructing a product.



How Can I experience VR?

The type of device shapes how users interact with the experience or their surroundings environments.



Seating and Room-scale
(Oculus)



Mobile Device
(Google Cardboard)



Mixed Reality
(HoloLens)

	Mobile Device	Seated	Room-Scale	Augmented Reality
Example Device	Google Cardboard Samsung Gear VR HTC Vive mobile VR Google Daydream	Oculus Rift 2 HTC Vive second generation	Oculus Rift 2 with Touch Virtual Reality HTC Vive 2nd Gen with start kit	Microsoft HoloLens Google Glass HP Windows Headset
User Movement	Free rotation of head Movement using controller	Free rotation of Head Movement using Controller Physical movements are not tracked	User can sit, stand or walk as physical movements are tracked	User can sit, stand or walk as physical movements are tracked
Physical Space	User is seated or standing	User seated or standing	Typically between 5X5 to 7X7 area where physical movement can be tracked	Visible through transparent displays, movement is unrestricted
Cost	Minimum cost of smart phone and headset is \$150, premium experience is up to \$800	A high end PC and headset unit cost \$1000 - \$3000	A high end PC and headset unit cost \$1000 - \$3000	Price varies anywhere from \$300 up to \$3000 for Microsoft HoloLens

Public



2

VR Success Stories – Recognizing the Benefits of Training with VR

VR Success Stories – How VR is used for Flood Adjuster Training

Flood Adjuster Training:

Property and Casualty Insurance Companies have realized the benefits of VR technology to train Claims adjusters.

Challenge

- Assessing water damage claims requires deep knowledge of multi-level business processes.
- Many adjusting firms create model homes to test adjuster's knowledge of flood damage and their assessment procedures. However, it is costly to build models representing a wide variety of structural, flood and other damages from disaster situations.

Solution

- A Property Casualty firm worked with a leading provider of VR development to create a digital two-story building with water damage.
- The designed VR lesson takes roughly 15 minutes, the claims adjusters are scored by how well they discover problems and whether they take appropriate steps to log and escalate issues.
- The P&C firm can now use six different floor plans and 500 different damage scenarios, which has resulted in thousands of different training experiences.



VR Success Stories – How VR is used in Accounting

VR for Audit Training:

Business students are recognizing the benefits of interactive training to learn complex and dry accounting rules and regulations, in a fun way.

- PwC designed a VR training experience for an educational institute for use in their business programs, using Samsung Gear VR.
- The VR training application helps students understand and learn key accounting principles by directing the user through accounting processes using real examples and games.



VR Success Stories – How VR is used in Medicine

VR and A/MR for Medicine:

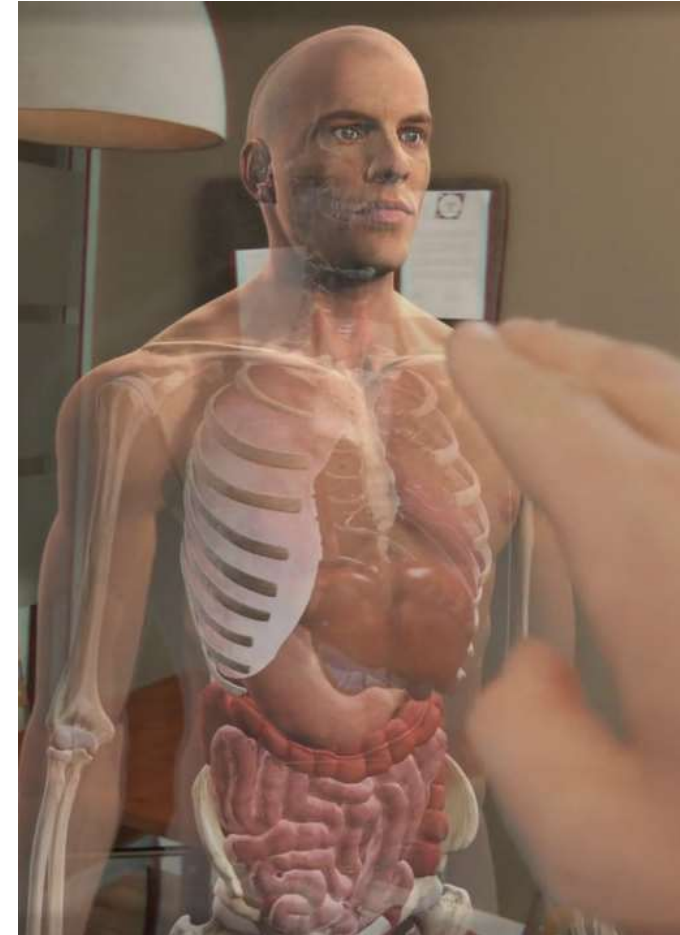
Medical communities are realizing ways VR and AR can improve research, education, training, and effectiveness.

VR technology allow trainees to experience tense clinical situations, and practice rapid thinking and analysis required for treating patients.

- Conduct surgical simulation trainings and gain valuable experience without risking lives.

A/MR technology supplements medical professionals knowledge to provide additional information when treating patiente.

- Draw blood more effectively, by assisting nurses find the patients vein.
- Study anatomy in 3D, allowing student to physical see how the body fits together.





3

Building Capacity with VR

How Will VR Help Build Capacity?

Flood Claim Adjuster Training

Underwriting Training

Disaster Response Training

NFIP Flood Adjuster Training

P&C Flood Claims Adjuster require exhaustive knowledge of the Standard Flood Insurance Policies, FEMA rules and regulations, and Xactimate 28 Claims Adjusting software to be able to create complex estimates and reports required by the NFIP.

VR training applications can help the NFIP and insurance companies develop a capable and well trained adjuster workforce that is best prepared for the disaster season.



Key Capabilities and Benefits

- ❖ Place adjusters in 3D illustrations of residential and commercial buildings and content that mimic what adjuster could come across during disaster season.
- ❖ Provide interactive assessments to Adjusters and Mentees understand the various types of structures, how to identify water damage, and evaluate the risk and cost associated with the damage.
- ❖ Incorporate tools into training to provide adjusters experience adjusting with Claims adjusting and estimation software.

How Will VR Help Build Capacity?

Flood Claim Adjuster
Training

**Underwriting
Training**

Disaster Response
Training

Underwriting Training

P&C Flood Insurance Underwriters require exhaustive knowledge of the NFIP, insurance policies, the flood map, risk rating, and elevation requirements.

VR training applications can help insurance companies create capable workforce that is able to learn and understand complex risk rating practices and policies through interactive training.



Key Capabilities and Benefits

- ❖ Place underwriters into 3D illustrations of residential and commercial buildings, so that can see and compare different structures.
- ❖ Create interactive assessments to engage learners and promote stronger understanding of the various policy requirements imposed by FEMA and the NFIP.
- ❖ Expose Underwriters to endless combinations policies types so they can gain a deep understanding, and properly rate and communicate risk.

How Will VR Help Build Capacity?

Flood Claim Adjuster
Training

Underwriting
Training

**Disaster Response
Training**

Disaster Response

When disasters hits community leaders and first responders are responsible for making complex decisions that can have large impacts, with limited data and time.

VR can equip key personal with the experience and tools needed (prior to a disaster) to take action confidently and swiftly during a disaster.



Key Capabilities and Benefits

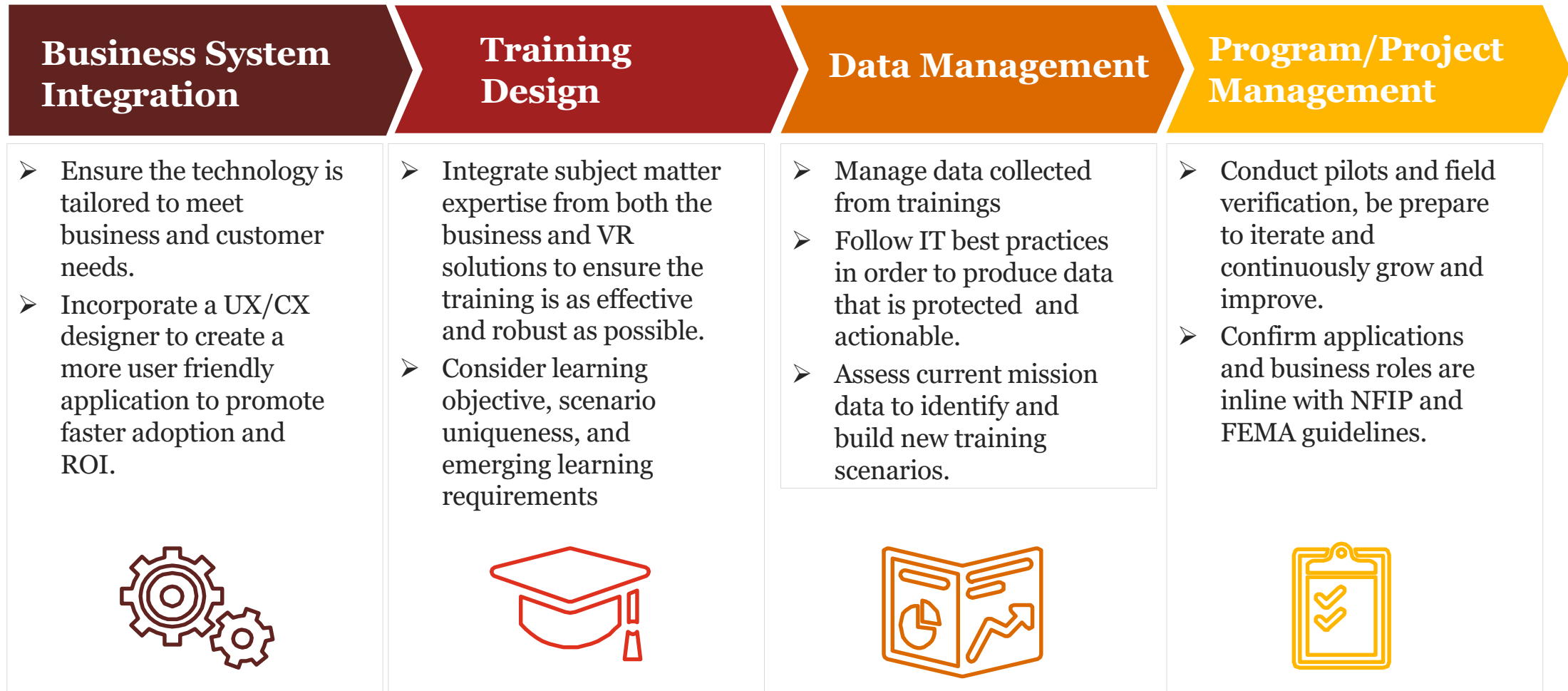
- ❖ Enables mitigation and flood insurance personnel to experience the stress of coordinating large and complex emergency responses (i.e., evacuations).
- ❖ Increases mitigation and flood insurance personal understanding the impact of their decisions through simulating results, and providing actionable data points.



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Considerations When Integrating VR Into Your Business

Integrating VR into Your Business



Barriers of Integrating VR into your Business

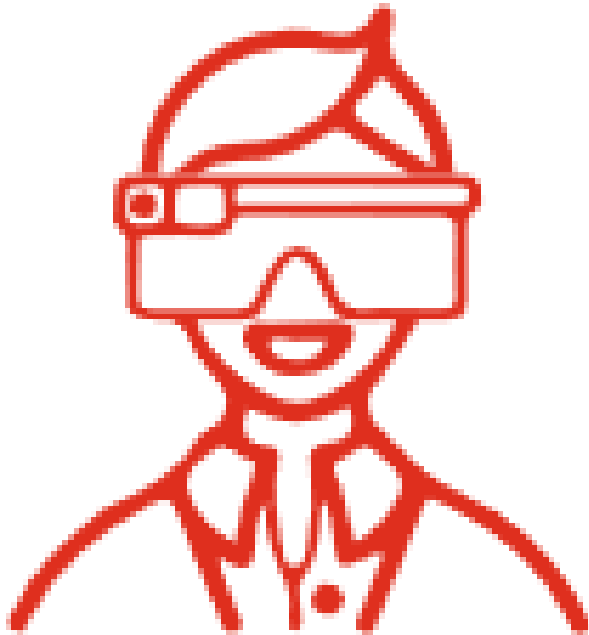
- **Poor Design.** Excessive brightness, rapid cues, or flashing lights are ways to not only shock users, but potentially cause nausea or headaches.
- **Fragmentation in the ecosystem:** Many variations in hardware, many operating systems, and many interaction methods.
- **Lack of standards:** Standards to describe information, share data, support interactions, integrate systems, and swap components or algorithms.
- **Technical & financial barriers:** Improving performance across areas such as optics; 3-D tracking, orientation, and display; interaction; and VR content authoring; as well as the cost of procuring devices for scalability.
- **Operational barriers:** The challenge of introducing new hardware and process change, securing data and the device, and repair and maintenance of the device.
- **User Readiness:** Content may not be appropriate for all users and users may not have access to appropriate hardware.

Benefits of VR



- 1** *34% More engaged staff*
- 1** *More comprehensive training program*
- 1** *Increase flexibility for the learner*
- 2** *More effective training, less mistakes*
- 2** *Access to training simulations*
- 2** *Reduced risk for learners*
- 3** *Access to robust data regarding results and progress*
- 4** *Unlimited variations of test scenarios*

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