



# Autodesk 3ds Max Design Visualization for VR

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 **AUTODESK**  
UNIVERSITY

Image courtesy of Sergio Mercedes





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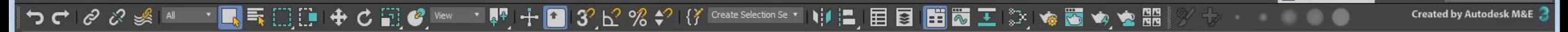


# VR Media

- 360 Images and Videos
- 360 S3D Images and Videos

-Passive  
*Immersive*





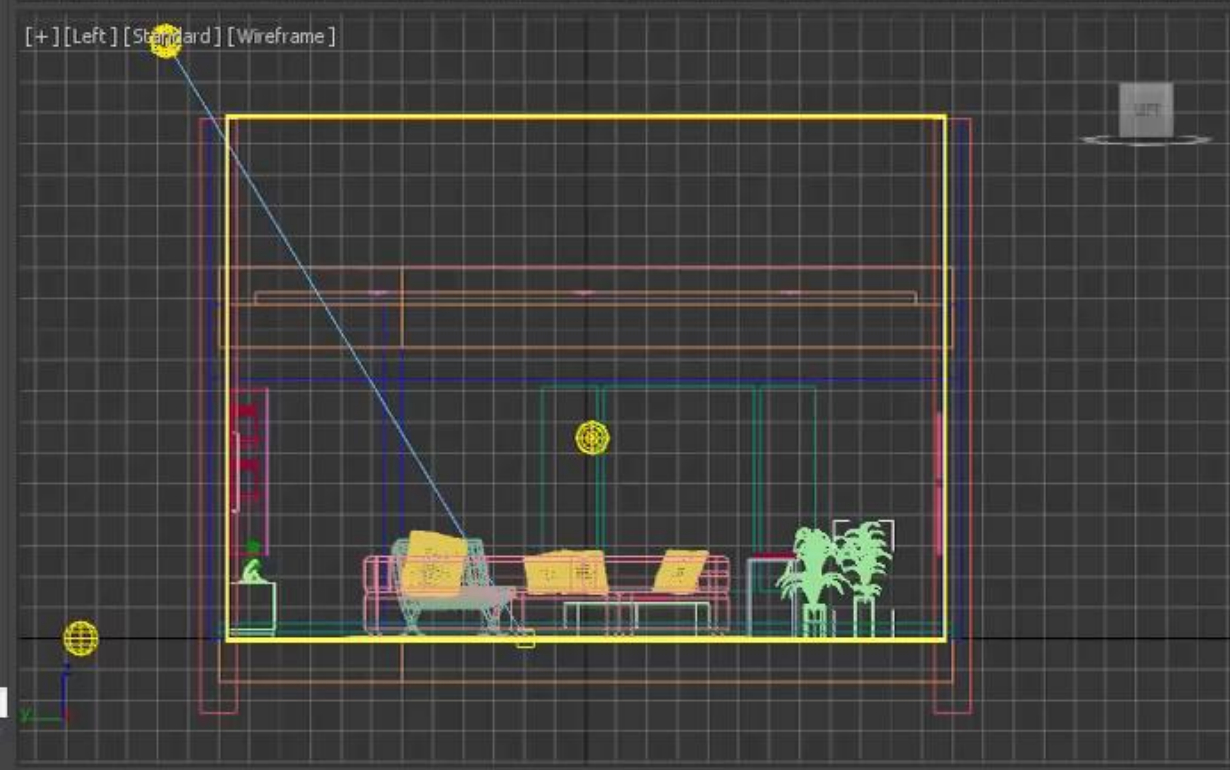
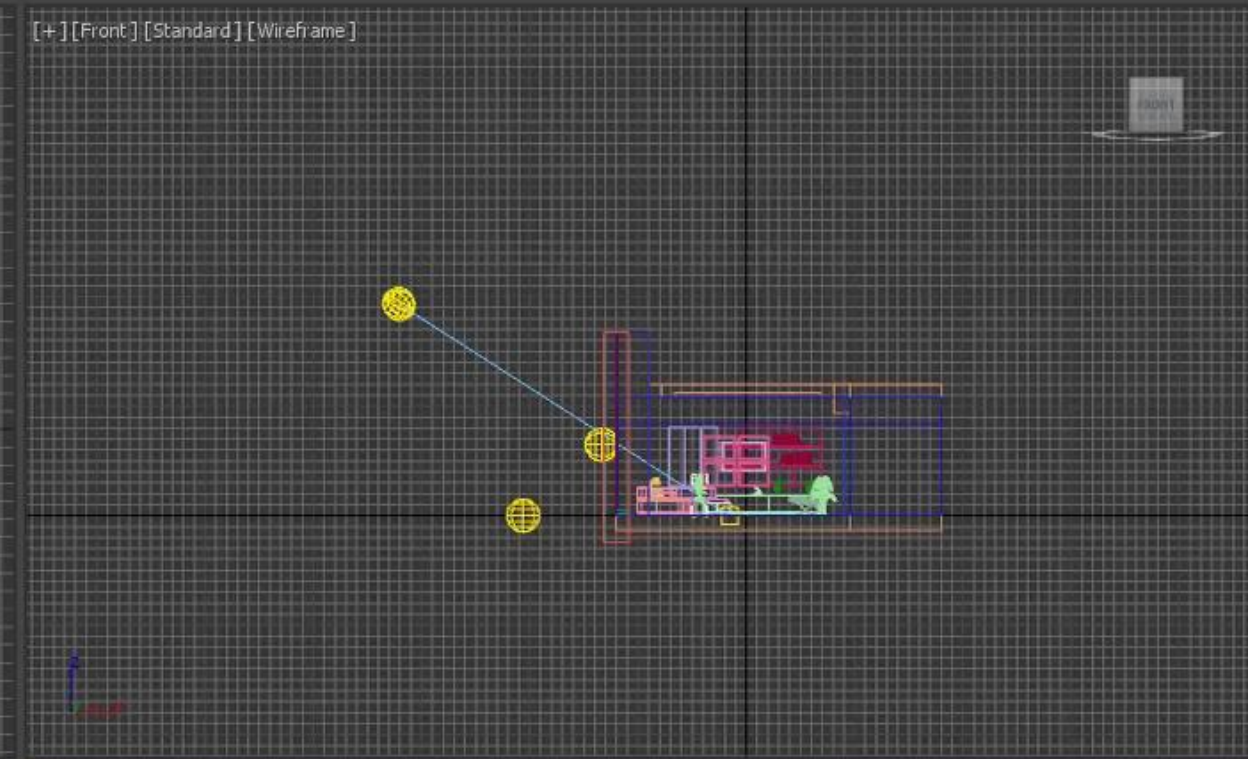
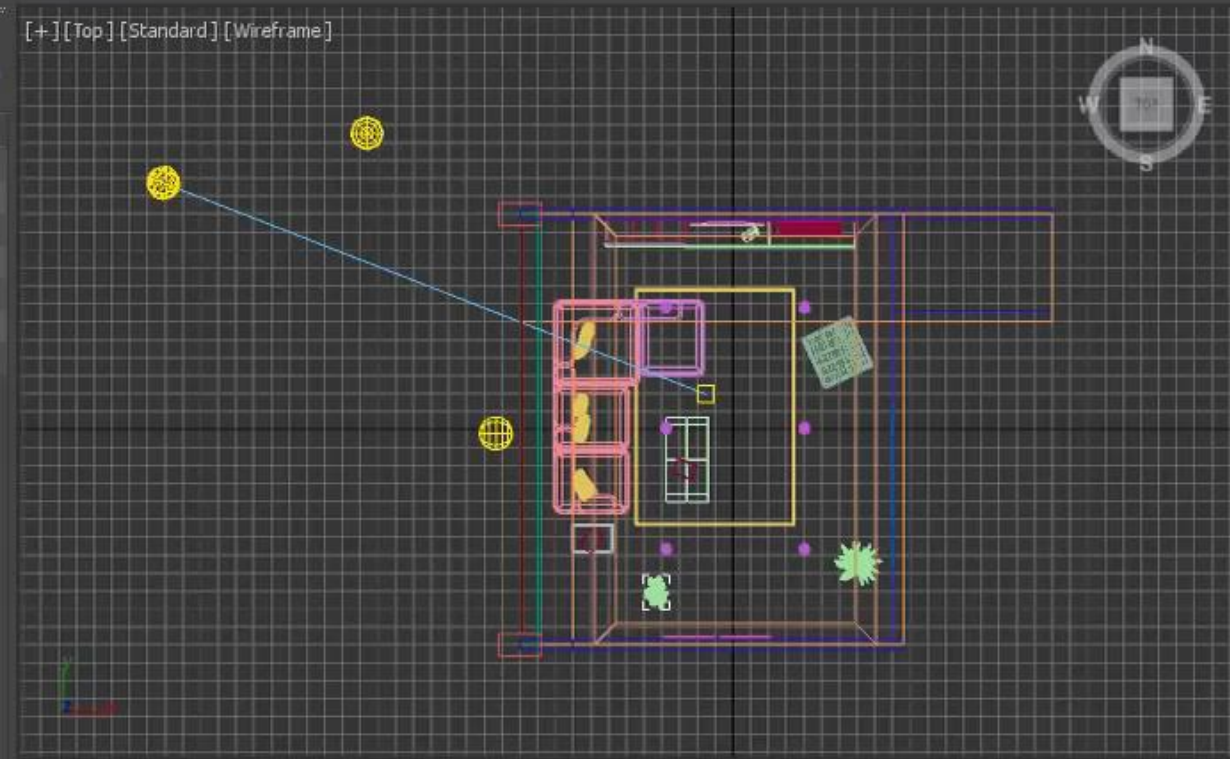
Modeling Freeform Selection Object Paint Populate

Select Display Edit Customize

Name (Sorted Ascending) Frozen

- 0 (default)
- Cameras
- Furniture
- Lights
- Plants
- Props
- Room

Default



Standard Primitives

Object Type

- AutoGrid
- Box
- Cone
- Sphere
- GeoSphere
- Cylinder
- Tube
- Torus
- Pyramid
- Teapot
- Plane
- TextPlus

Name and Color



# VR Media

- 360 Images and Videos
- 360 S3D Images and Videos
  
- Sitting VR
- Room Scale VR
- Augmented Reality
- Mixed Realities

-Passive  
*Immersive*

-Active  
*Immersive & Interactive*



# Premium VR

  
**VIVE**  
htc | STEAMVR



  
oculus  
rift



  
PlayStation.VR

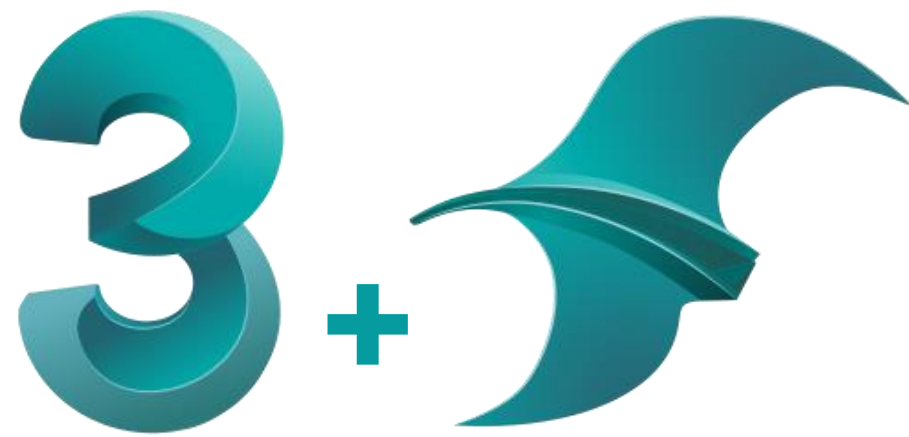


# VR Controllers





# Interactive



3ds Max

Stingray

# BUNDLED



Image courtesy of

# What is Stingray?



## Stingray is:

A real-time, immersive, world building and story telling authoring toolset.

Both a **product** and a **technology component / platform**.

Ideal for creating AR|VR immersive experiences that:

Look good!

Run fast!



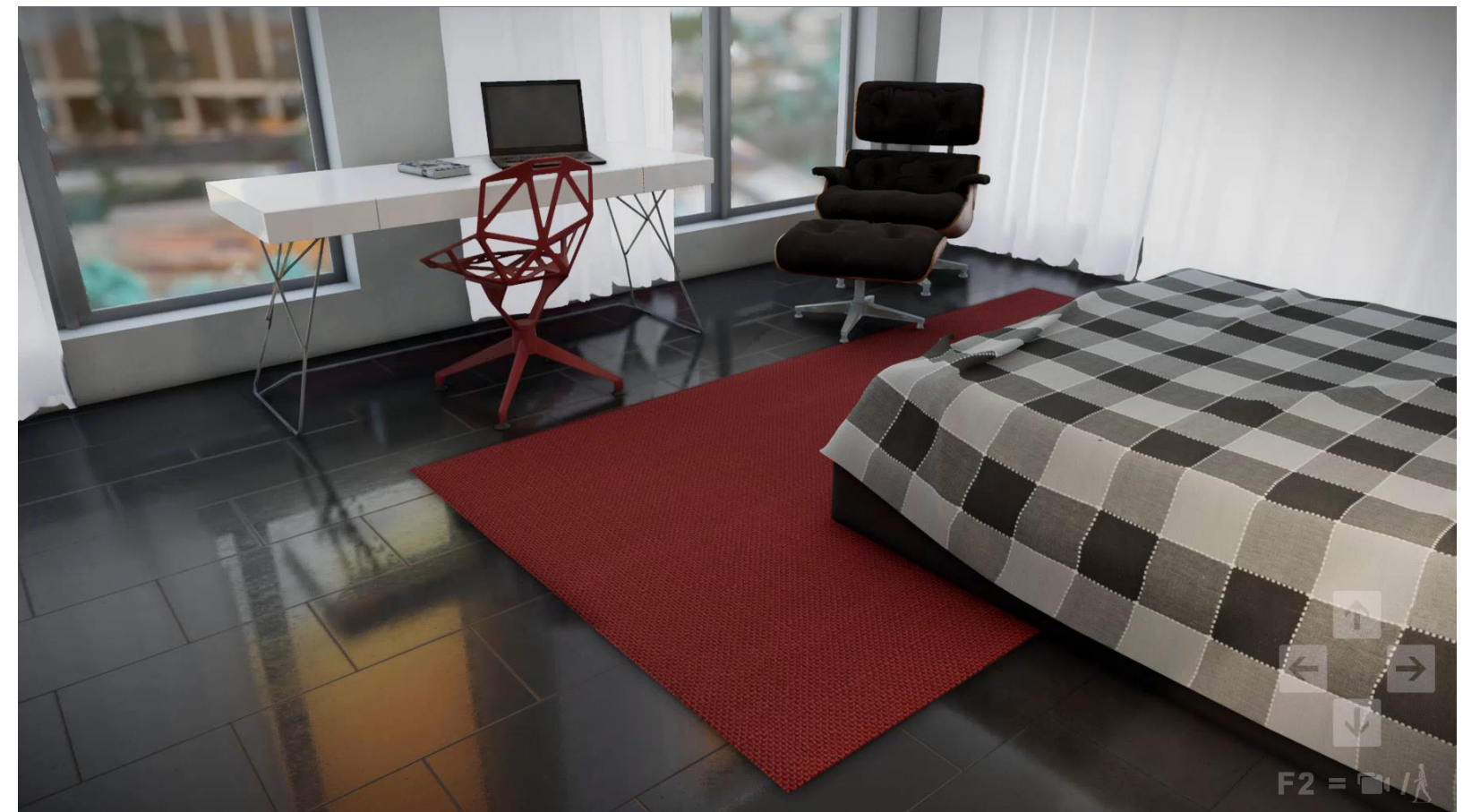
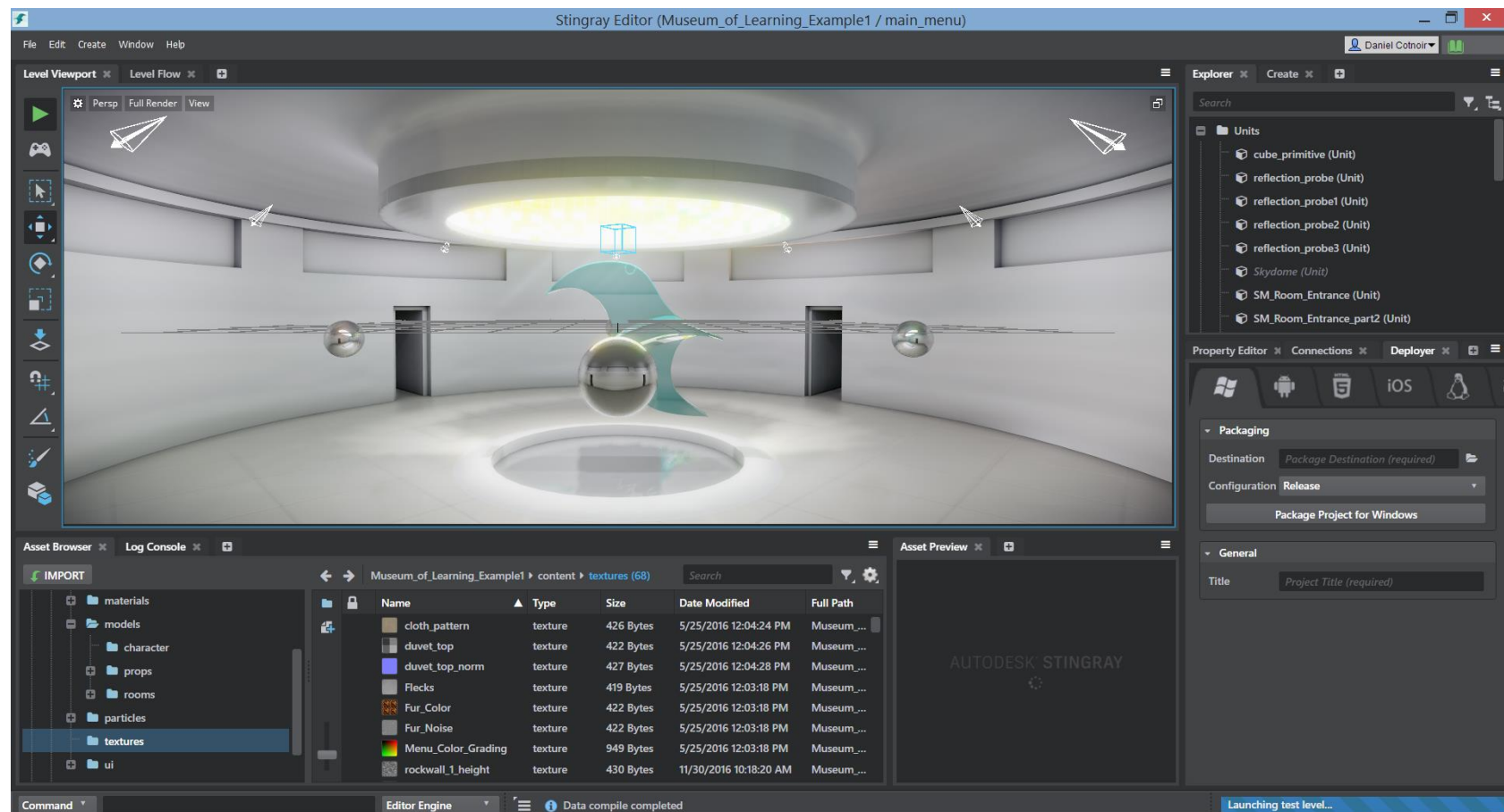
# What's in Stingray?

Stingray includes 2 main components:



The Stingray Editor  
“The Tools”

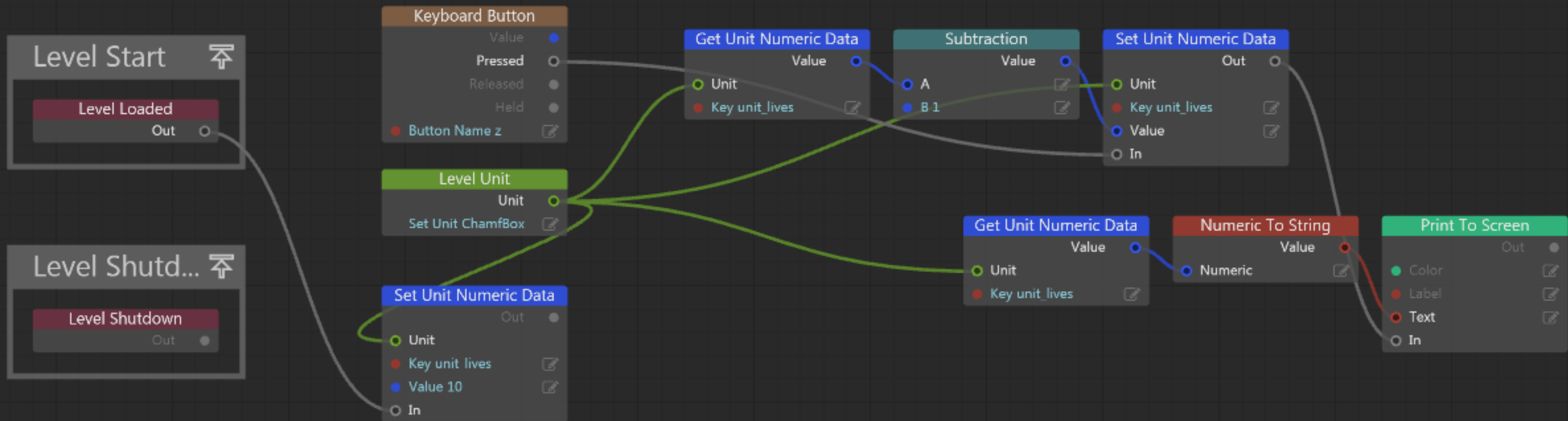
The Stingray Engine  
“The Engine”



# Features “Flow”



- Node-based authoring environment to create your “interactive experience logic”
- Easy to use for non-programmers

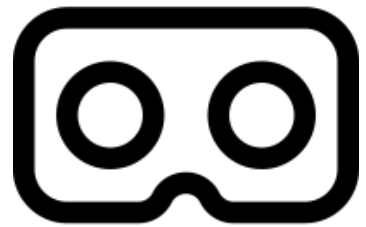




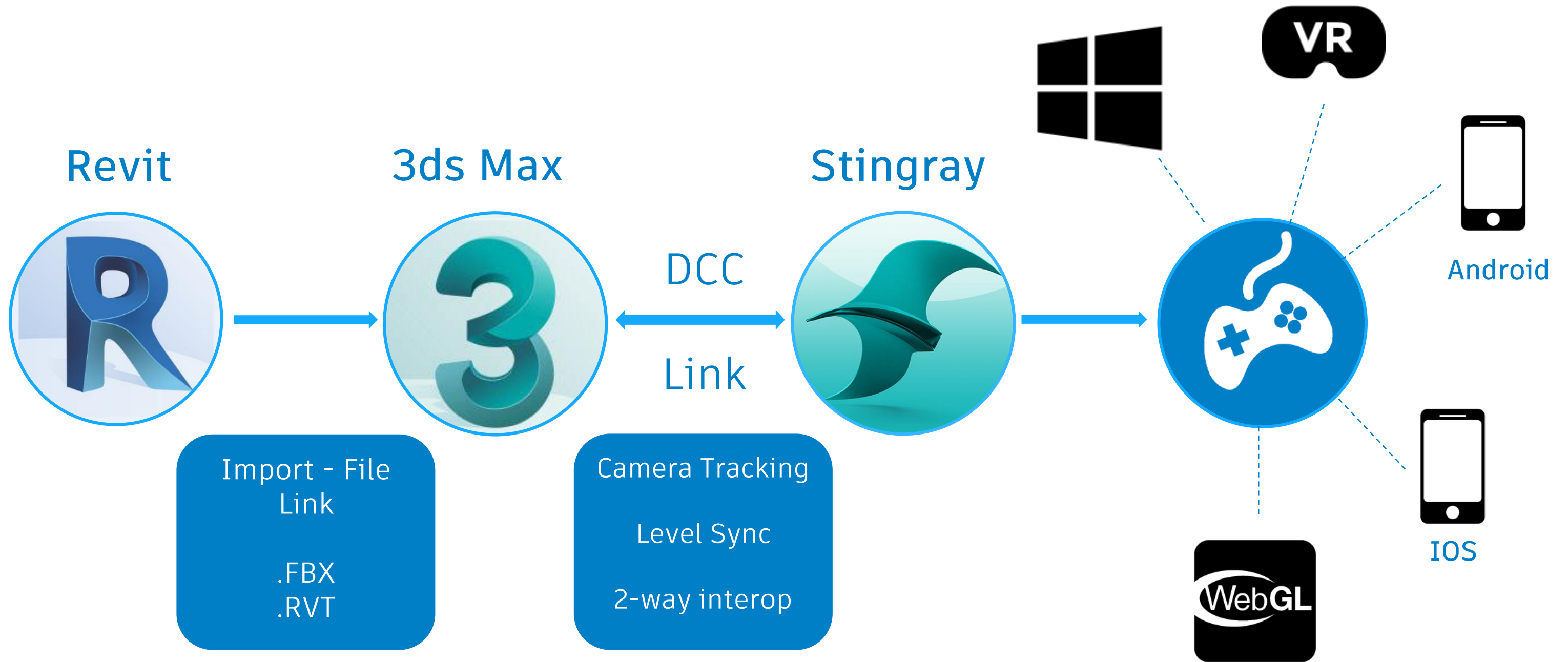
# Interactive

## Stingray Level Sync

- One Step to VR Experience
- Vray Material Conversion
- Support for Lights, Cameras
- Easy to iterate



# 3ds Max & Stingray







NY\_Apartment516

Modifier List

- UVW Map
- Editable Mesh

Parameters

Mapping:

- Planar
- Cylindrical  Cap
- Spherical
- Shrink Wrap
- Box
- Face
- XYZ to UWW

Length: 3.567m

Width: 2.574m

Height: 0.22m

U Tile: 1.0  Flip

V Tile: 1.0  Flip

W Tile: 1.0  Flip

Real-World Map Size

Channel:

- Map Channel: 1
- Vertex Color Channel

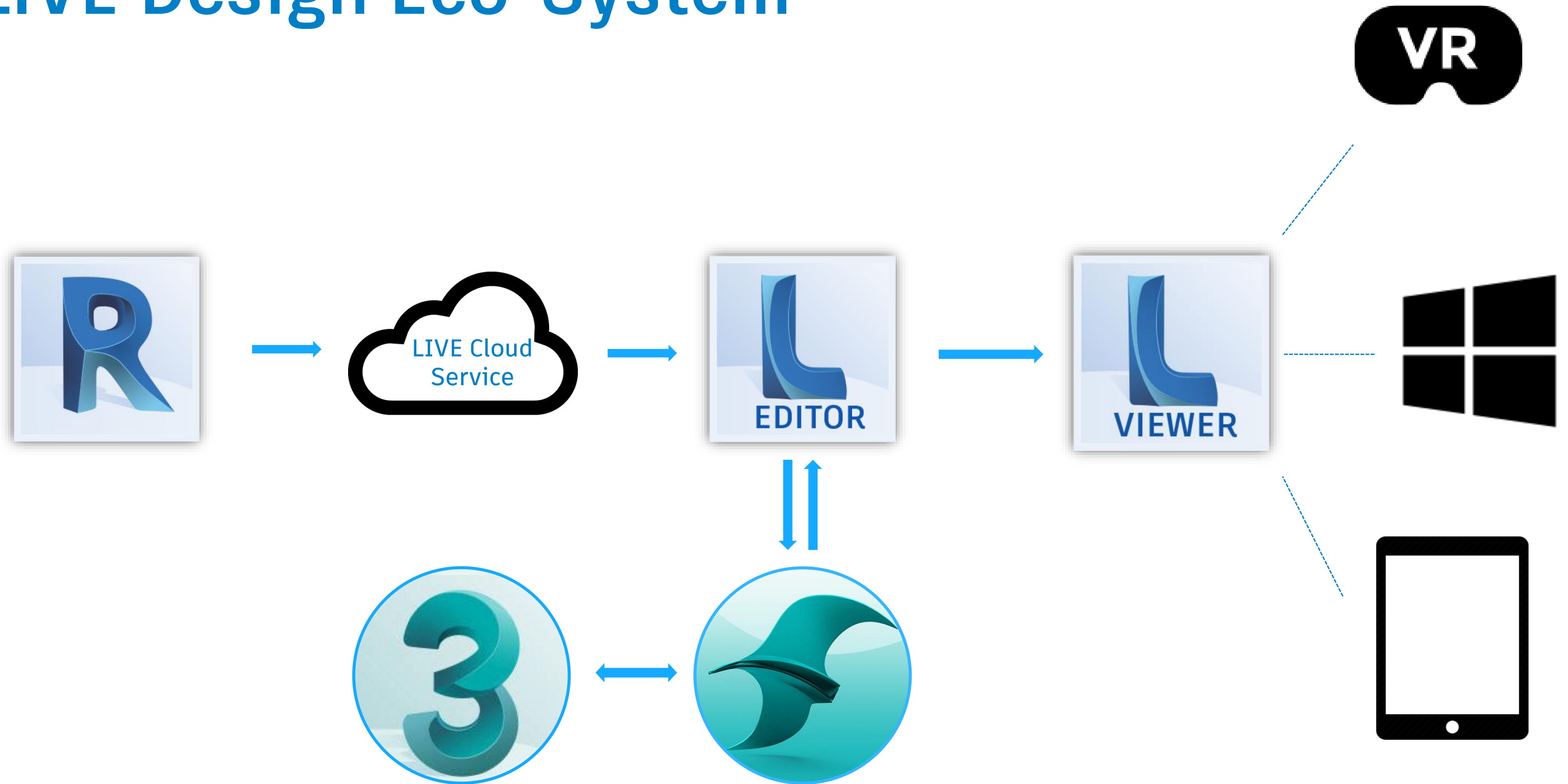
Alignment:

- X
- Y
- Z

Manipulate

Fit Center

# LIVE Design Eco-System





Architecture Structure Insert Annotate Analyze Massing & Site Collaborate View Manage Add-Ins Modify

Modify Wall Door Window Component Column Roof Ceiling Floor Curtain System Mullion Railing Ramp Stair Model Text Model Line Model Group Room Room Separator Tag Room Area Area Boundary Tag Area By Face Shaft Wall Vertical Dormer Level Grid Set Show Ref Viewer

Select Build Circulation Model Room & Area Opening Datum Work Plane

Properties

Floor Plan

Floor Plan: Level 1 Edit Type

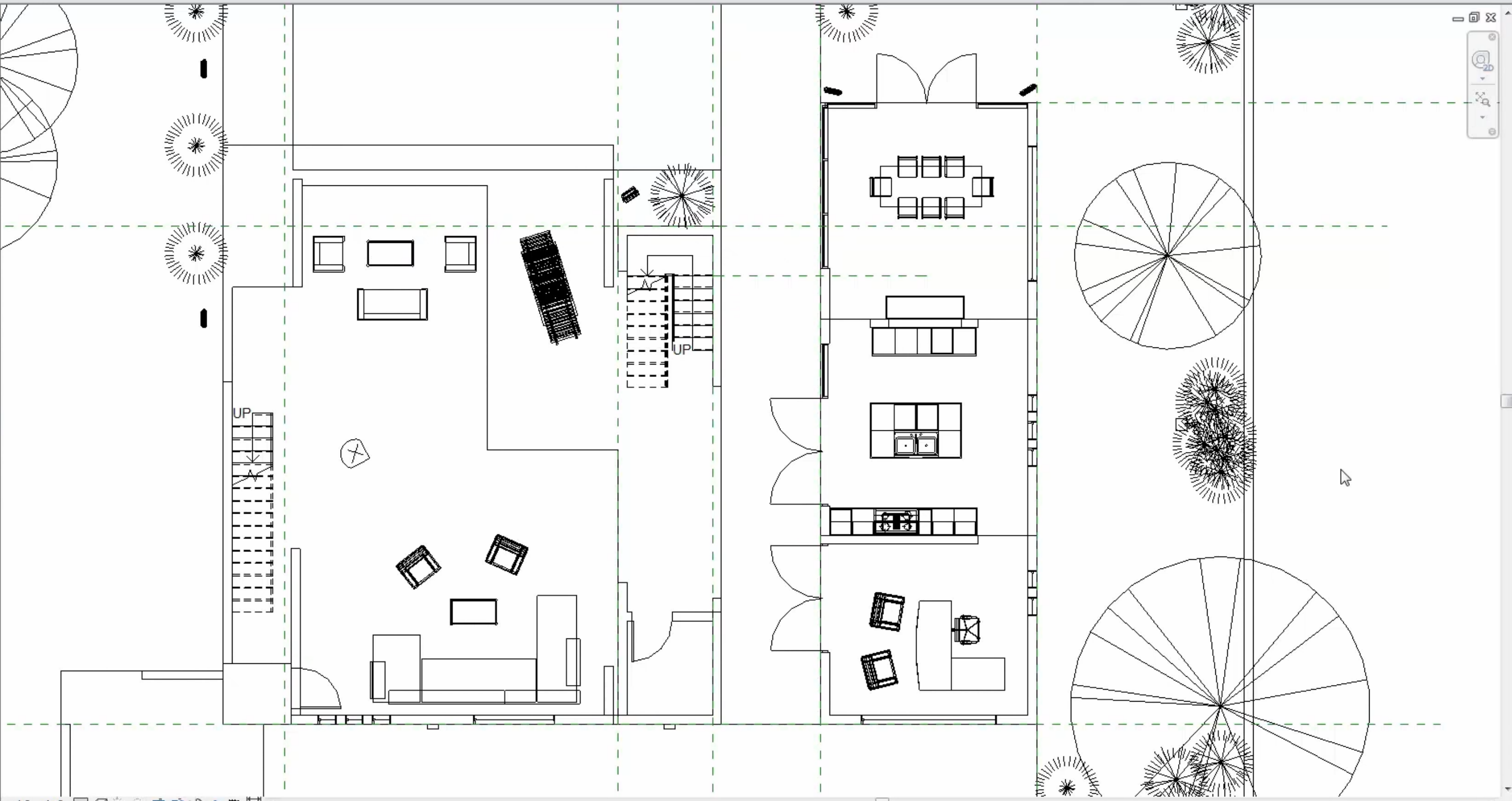
Graphics

View Scale	1/8" = 1'-0"
Scale Value 1:	96
Display Model	Normal
Detail Level	Coarse
Parts Visibility	Show Original
Visibility/Graphics ...	Edit...
Graphic Display O...	Edit...
Underlay	None
Underlay Orientation	Plan
Orientation	Project North
Wall Join Display	Clean all wall joins
Discipline	Architectural
Show Hidden Lines	By Discipline
Color Scheme Loc...	Background
Color Scheme	<none>

Properties help Apply

Project Browser - Villa Martini.rvt

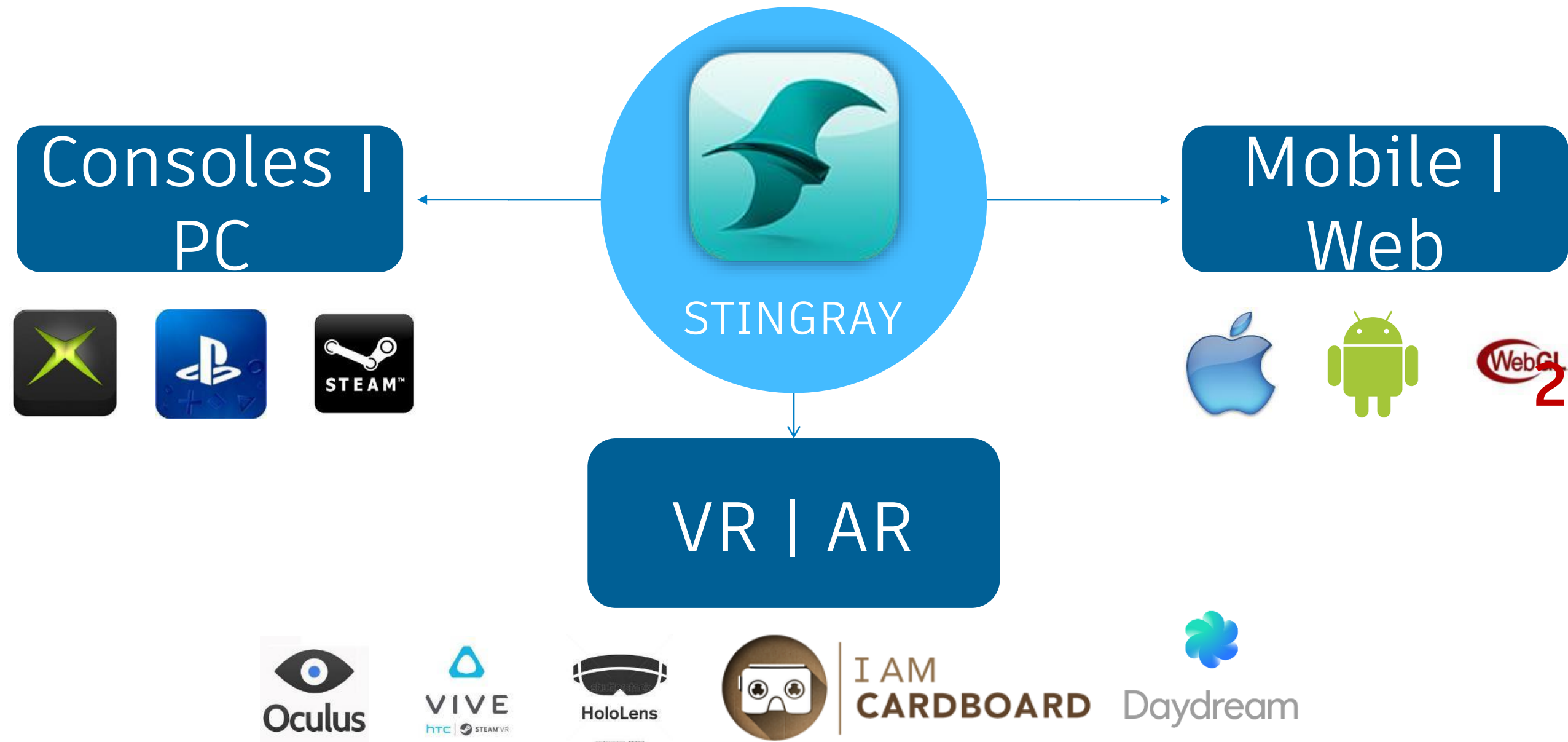
- Views (all)
- Floor Plans
  - Level 1**
  - Level 2
  - Level 3
  - Pool Deep
  - Pool Shallow
  - Site
- Ceiling Plans
  - Level 1
  - Level 2
  - Level 3
  - Pool Deep
  - Pool Shallow
- 3D Views
  - Den
  - Dining Room
  - Driveway
  - Kitchen
  - Living Room
  - Pool Shot
  - (3D)





# The engine runs natively across platforms

- Author once, connect and publish to many:



# Questions?

[Facebook.com/alexadsk](https://www.facebook.com/alexadsk)

[Twitter.com/alexadsk](https://twitter.com/alexadsk)

[linkedin.com/in/alexhorst/](https://www.linkedin.com/in/alexhorst/)

[area.autodesk.com](https://area.autodesk.com)





Make anything.



# Hardware: VR-Ready PCs

- Windows Only
  - Experimental Linux support for HTC Vive
- Intel Core i5 4590 or AMD 8350
- 4GB RAM
- Nvidia GeForce GTX 970 or AMD Radeon R9 290
  - Nvidia preferred (For now)
  - About Quadro cards...
  - [http://www.videocardbenchmark.net/high\\_end\\_gpus.html](http://www.videocardbenchmark.net/high_end_gpus.html)
- Will run you about 1500 USD

# Hardware: VR-Ready PCs

Oculus: <https://www.oculus.com/oculus-ready-pcs/>

HTC Vive: <https://www.vive.com/ca/ready/>

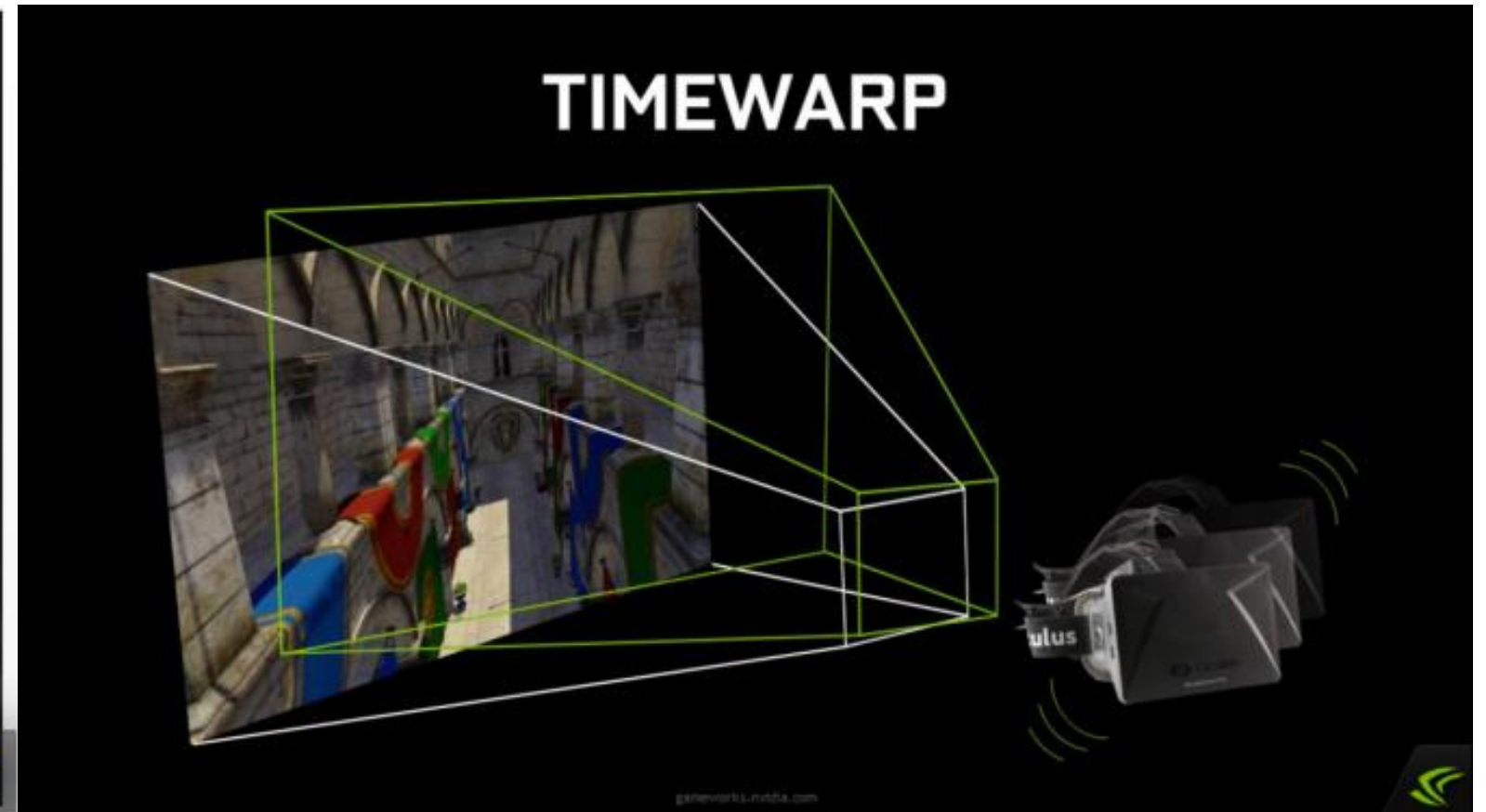
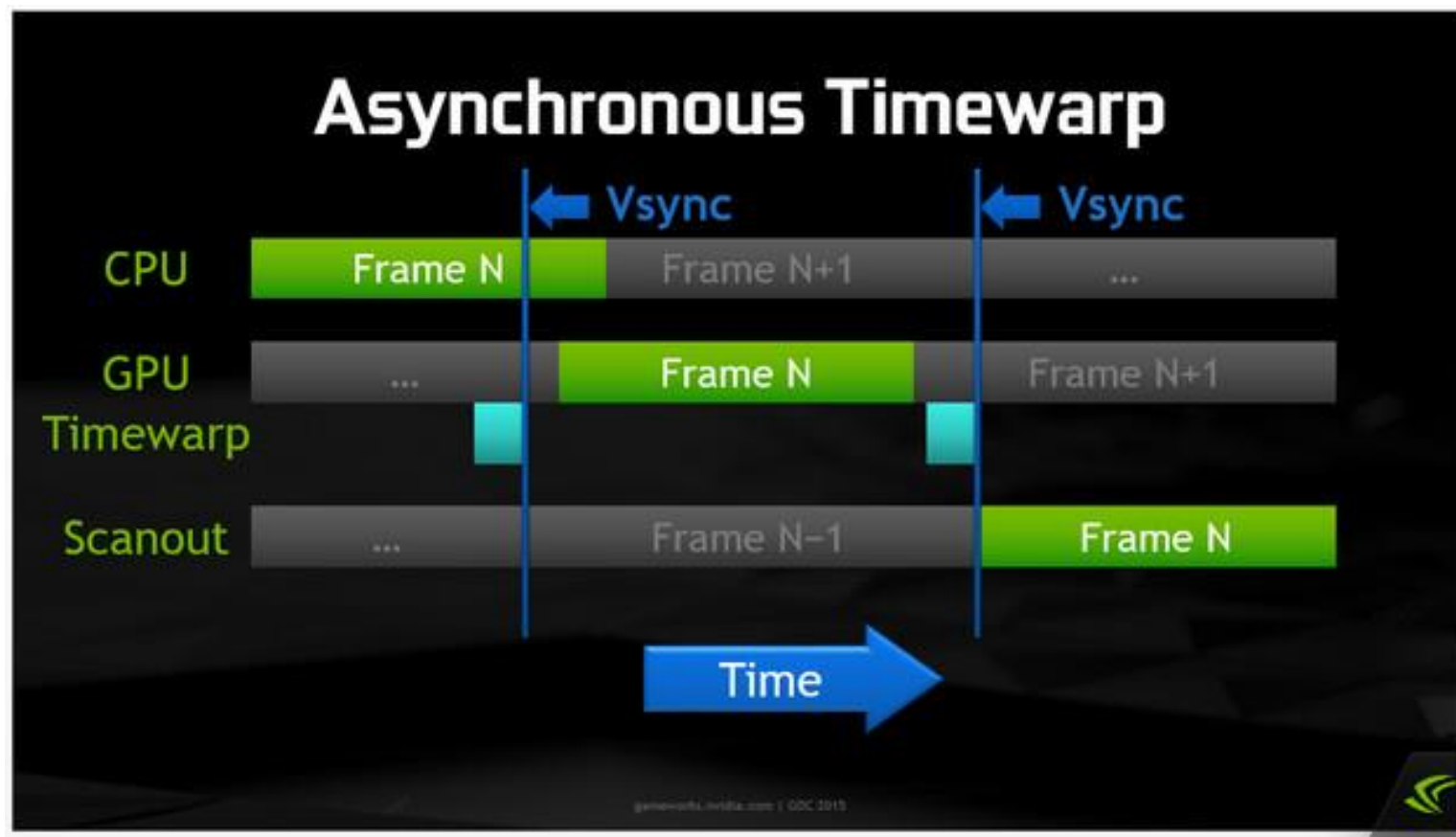
## What about Laptops?

- Pretty slick laptops with GTX1060!
  - <https://www.razerzone.com/ca-en/gaming-systems/razer-blade>
  - <https://www.asus.com/ROG-Republic-Of-Gamers/ROG-GL502VM/>
- Pretty large laptops with GTX 1080!
  - <https://www.razerzone.com/ca-en/gaming-systems/razer-blade-pro>
  - <https://www.asus.com/ROG-Republic-Of-Gamers/ROG-G800VI/>



# Performances

- (Oculus) Asynchronous Time & Space Warp
- (HTC Vive) ASynch Reprojections & Interleaved Reprojection







Make anything.