

# Virtual Worlds & Health Tech



Jonathon Richter, Ed.D.

Immersive Learning Research Network

[jonathonrichter@gmail.com](mailto:jonathonrichter@gmail.com)

# Are TV and Video Games Making Kids Fat?

The effects of "screen time" on childhood obesity.



A background image showing a person wearing a VR headset and holding a smartphone, illustrating the concept of immersion. The image is faded and serves as a backdrop for the text.

# Immersion can lead to learning

- Draws on sensory, actional, and symbolic factors.
  - Digitally replicates the experience of location.
  - Immersive Learning can:
    - **Provide multiple perspectives**
    - **Enhance or highlight key features**
    - **Situate the learner**
    - **Enable transfer of difficult-to-understand info**
- (Dede, 2009)

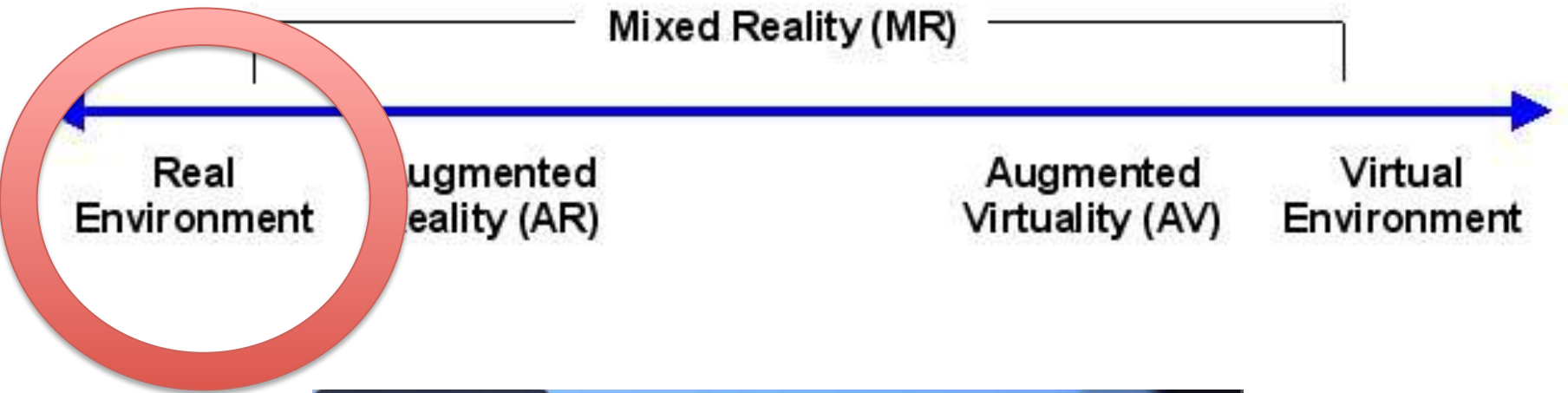
# Define Virtual Worlds



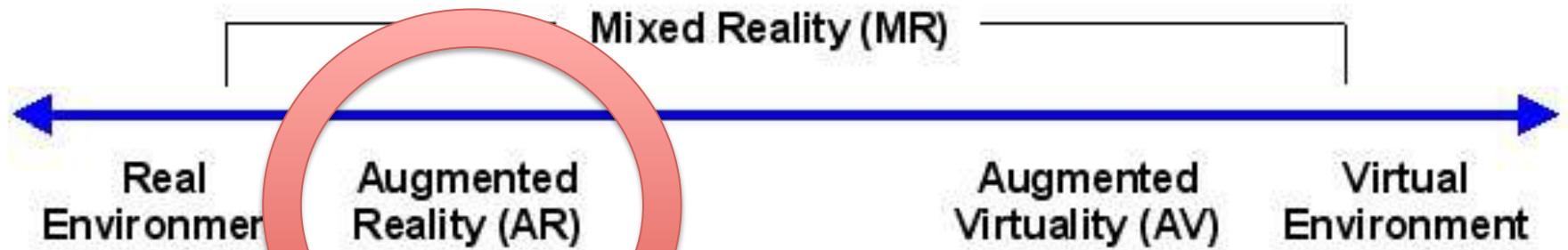
# Immersive spectrum



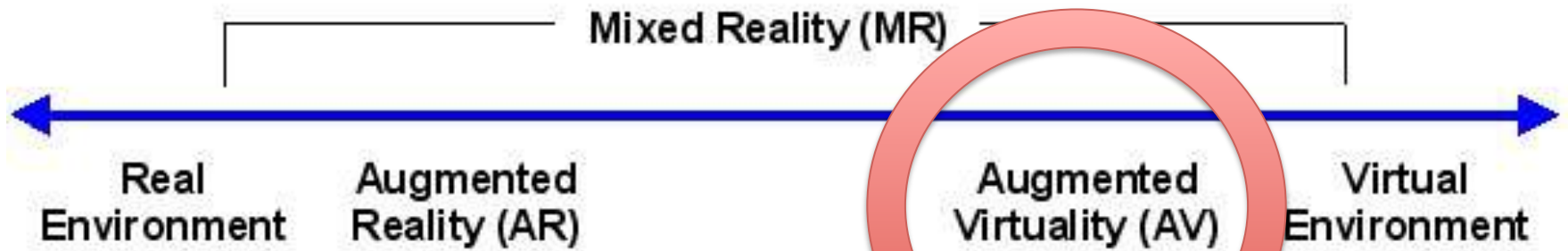
# Immersive spectrum



# Immersive spectrum



# Immersive spectrum



# Immersive spectrum



# Immersive spectrum



- Patterns to combine the virtual and the real
- Situating the learner within a designed world
- Scaffolding to make things make more sense and more part of one's personal ecology.
- Providing a sense of AGENCY to people over things that seem intangible, abstract, or even irrational.

# Potential for Immersive Tech for Nutritional Education

- Highlight aspects of reality that humans are not good at seeing, within context.
- Provide “embodied perspective” by showing scope, scale, and long term consequences at a personal level that people can understand and allow them to take action on them and see and “feel” the changes.
- Provide motivational “hooks” to increase desirable eating and health-related behaviors.

# EcoMUVE & EcoMobile

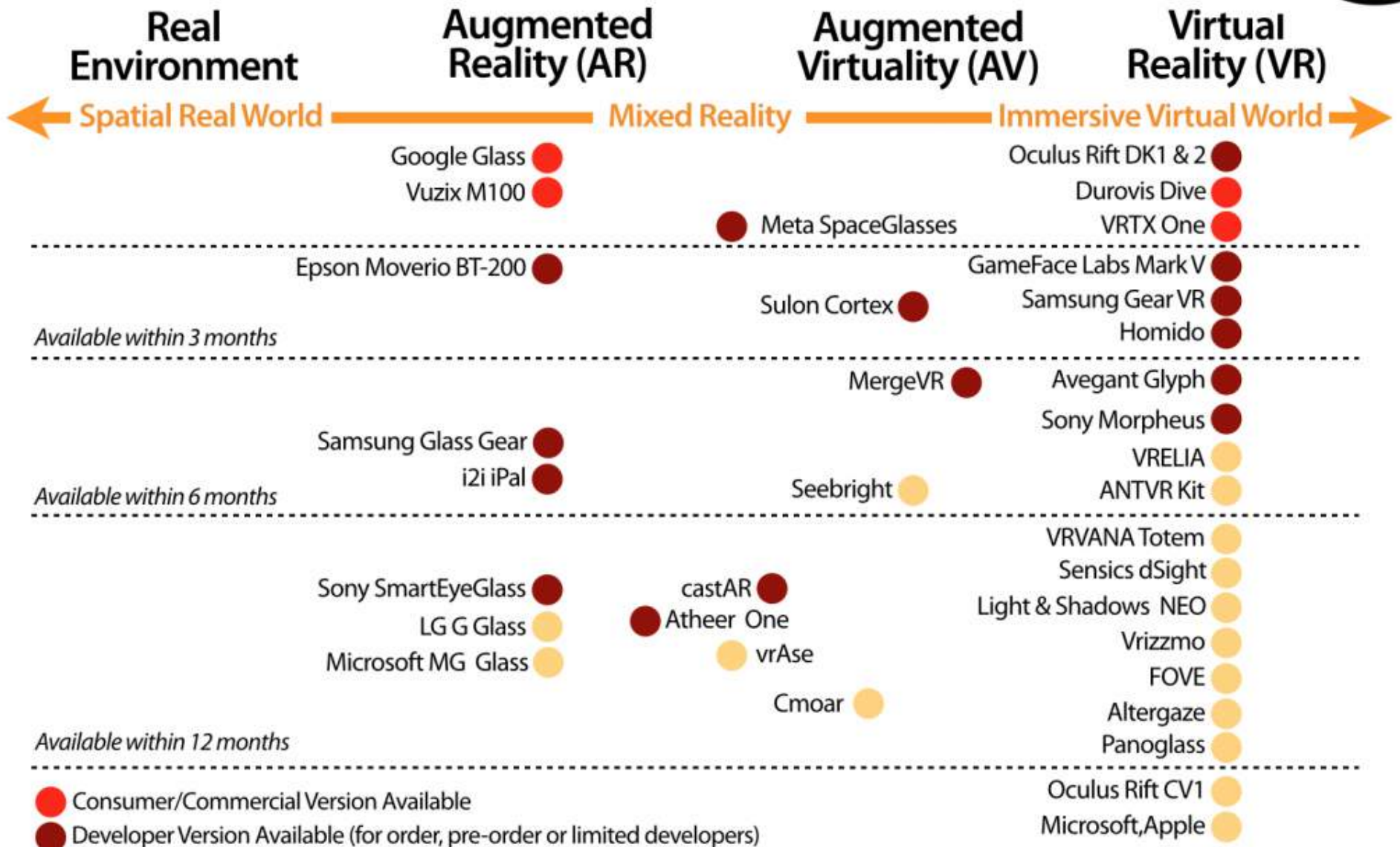


# NEVER ALONE

< KISIMA INNITCHUNA >



# Augmented & Virtual Reality Device Spectrum



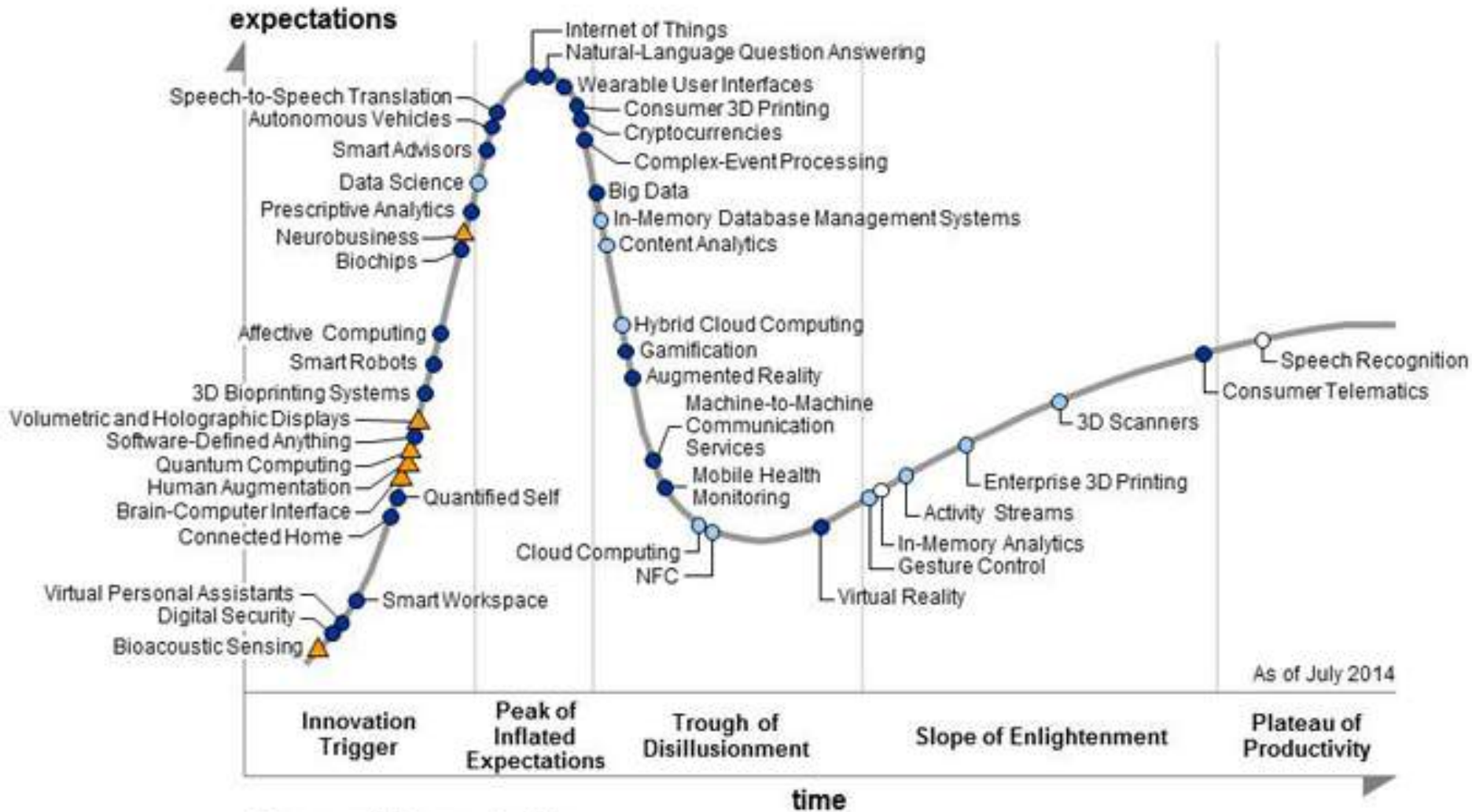
Q3 2014 Update. Launch timings are estimates

# Player motivational types

- Achievement
- Socialization
- Exploration
- Mayhem

Find out your own Game Play Motivational Profile at <http://apps.quantifoundry.com/lab/>

# Gartner Hype Cycle

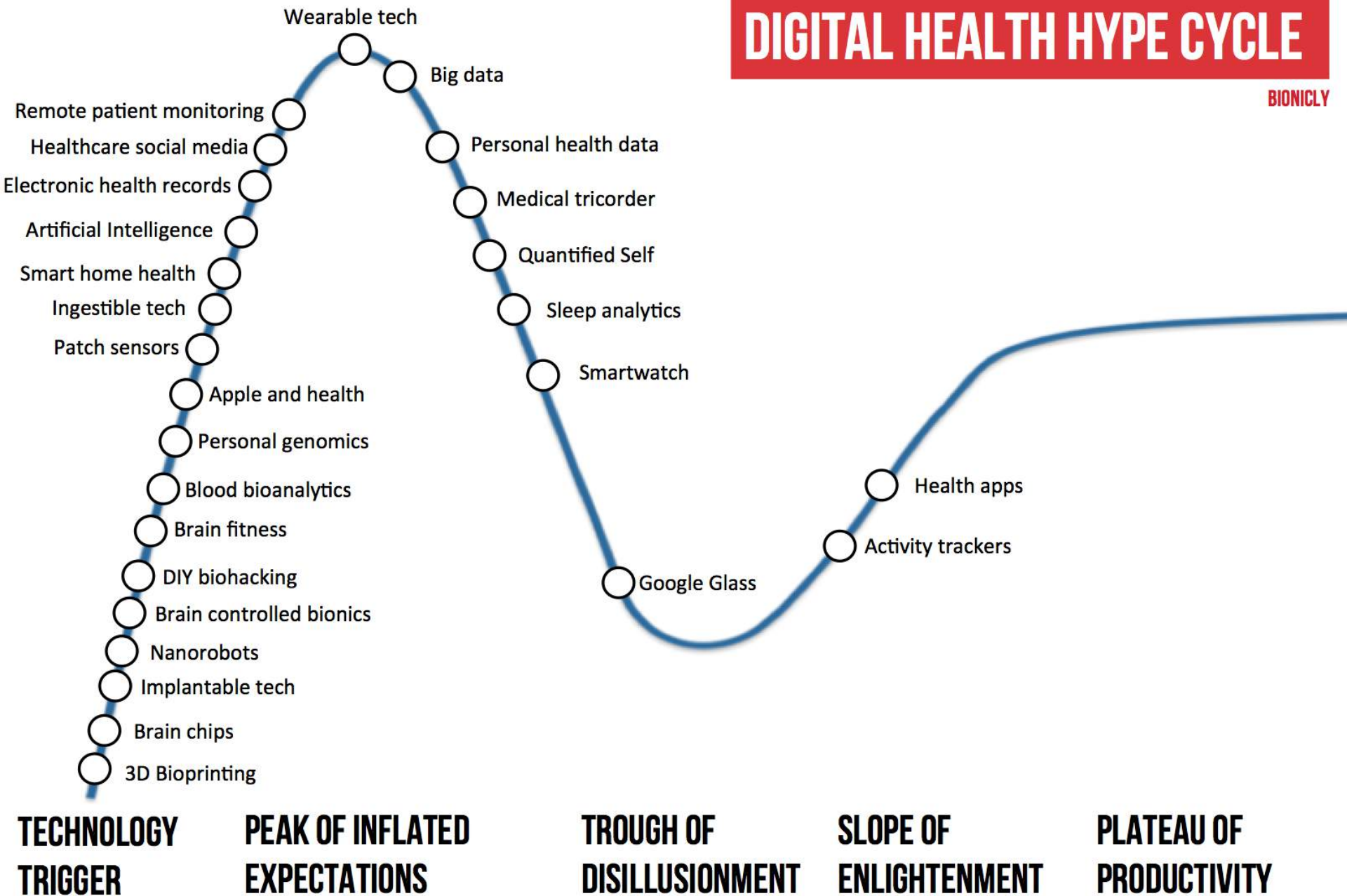


Plateau will be reached in:

○ less than 2 years   ● 2 to 5 years   ● 5 to 10 years   ▲ more than 10 years   ⊗ obsolete before plateau

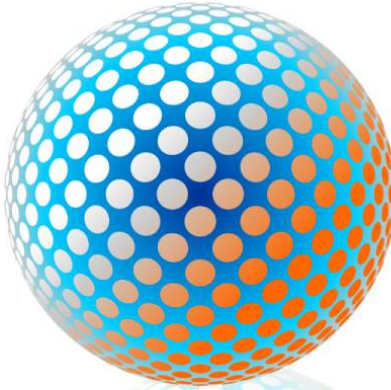
# DIGITAL HEALTH HYPE CYCLE

BIONICLY



# From Immersion to Embodiment

- We're moving off of the screen and back into the physical world, bringing the contents with us.
- We're going mobile: Action!
- We COULD begin to make connections to health, nutrition, and well-being by connecting ourselves... to games that enhance our lives.
- "Life is a game. All you have to do is know how to play it." ~ Anonymous



IMMERSIVE LEARNING RESEARCH NETWORK

<http://immersivelrn.org>

**AMERICAN EDUCATIONAL RESEARCH ASSOCIATION**

**Special Interest Group**

**ARiEL**

Applied Research in  
Immersive Environments for Learning

<http://www.arielsig.net/>

# Thank you!



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[jonathonrichter@gmail.com](mailto:jonathonrichter@gmail.com)

# References

Slide 3: Dede, C.(2009). Immersive Interfaces for Engagement and Learning. Science, 323, 66

Slide 4: **Define Virtual Worlds:**

- bottom left: Simulations Games Development Immersion Program from J. Richter's "Intro to Game Development" Course (2011) supported by National Science Foundation Grant 0802580
- top right: mobile game photo from socialnomics.net
- bottom right: SMALLab <http://smallablearning.com/category/blog/>

Slide 5: **Milgram's Reality – Virtuality Spectrum** [https://en.wikipedia.org/wiki/Reality%E2%80%93virtuality\\_continuum](https://en.wikipedia.org/wiki/Reality%E2%80%93virtuality_continuum)

- Nintendo 3Ds

<http://www.evilcontrollers.com/evilblog/wp-content/uploads/2011/03/Nintendo-3DS1.jpg>

Slide 11: Gartner Hype Cycle from <http://www.gartner.com/newsroom/id/2819918>

Slide 12: **Digital Health Hype Cycle** by Stephen Davies from <http://bionicly.com/digital-health-hype-cycle/>