# METAVERSE ACADEMY

# Futures Thinking in Immersive Tech

Strategic foresight for incubators navigating the future of AR/VR/XR and deep tech.


Co-funded by the European Union

# Learning Objectives

1 **Understand the role of futures thinking in innovation**

Learn how strategic foresight drives technological advancement and creates competitive advantages for startups

2 **Explore trends and signals shaping immersive tech**

Identify key developments and weak signals that will transform the AR/VR/XR landscape in the coming years

3 **Apply scenario-based methods to support startup incubation**

Develop practical tools to help founders navigate uncertainty and position for emerging opportunities

# What is Futures Thinking?

### Long-term vision over short-term fixes

Futures thinking encourages looking beyond immediate trends to identify deeper patterns of change that will reshape industries and society over time.

### Exploration of multiple scenarios, not predictions

Rather than attempting to predict a single future, futures thinking develops multiple plausible scenarios to prepare for various possibilities.

### Informed decision-making amid uncertainty

By systematically exploring possible futures, organizations can make more resilient strategies and identify opportunities others might miss.

Futures thinking is a structured approach that helps organizations anticipate change, challenge assumptions, and develop robust strategies for navigating complex environments.

# Why It Matters for Incubators

### Stay proactive instead of reactive

Incubators equipped with futures thinking can guide startups toward emerging opportunities before they become obvious to competitors.

### Position startups in emerging markets

Understanding future landscapes helps incubators identify underserved niches and developing ecosystems where startups can establish early leadership.

### Future-proof support services

Incubators can evolve their programs, mentorship, and resources to address the changing needs of deep tech startups in rapidly evolving environments.

In the fast-changing world of immersive technology, yesterday's innovations quickly become today's table stakes. Futures thinking gives incubators the edge to stay ahead of the curve.

# Introduction to Strategic Foresight

Strategic foresight is a systematic process for exploring potential futures to inform present-day decision making. For incubators supporting deep tech startups, it provides critical context for investment decisions and mentorship focus.

The process is iterative, encouraging continuous scanning and adaptation as new information emerges. This creates resilient strategies that can evolve with the changing technological landscape.

### Horizon scanning

Identifying trends, signals, and emerging issues across technological, social, economic, environmental, and political domains

### Trend analysis

Interpreting the implications of trends for startups, markets, and society

### Scenario planning

Building alternate futures to explore possible outcomes and develop robust strategies

# Megatrends Shaping Immersive Tech

## Spatial Computing

Digital environments are becoming increasingly integrated with physical spaces, creating seamless interactions between virtual and real worlds. This drives demand for immersive interfaces and spatial design expertise.

## Ambient Intelligence

Smart environments that anticipate human needs through embedded sensors and AI are creating new opportunities for contextual AR experiences that respond intelligently to user surroundings.

## Neurotech & Brain-Computer Interfaces

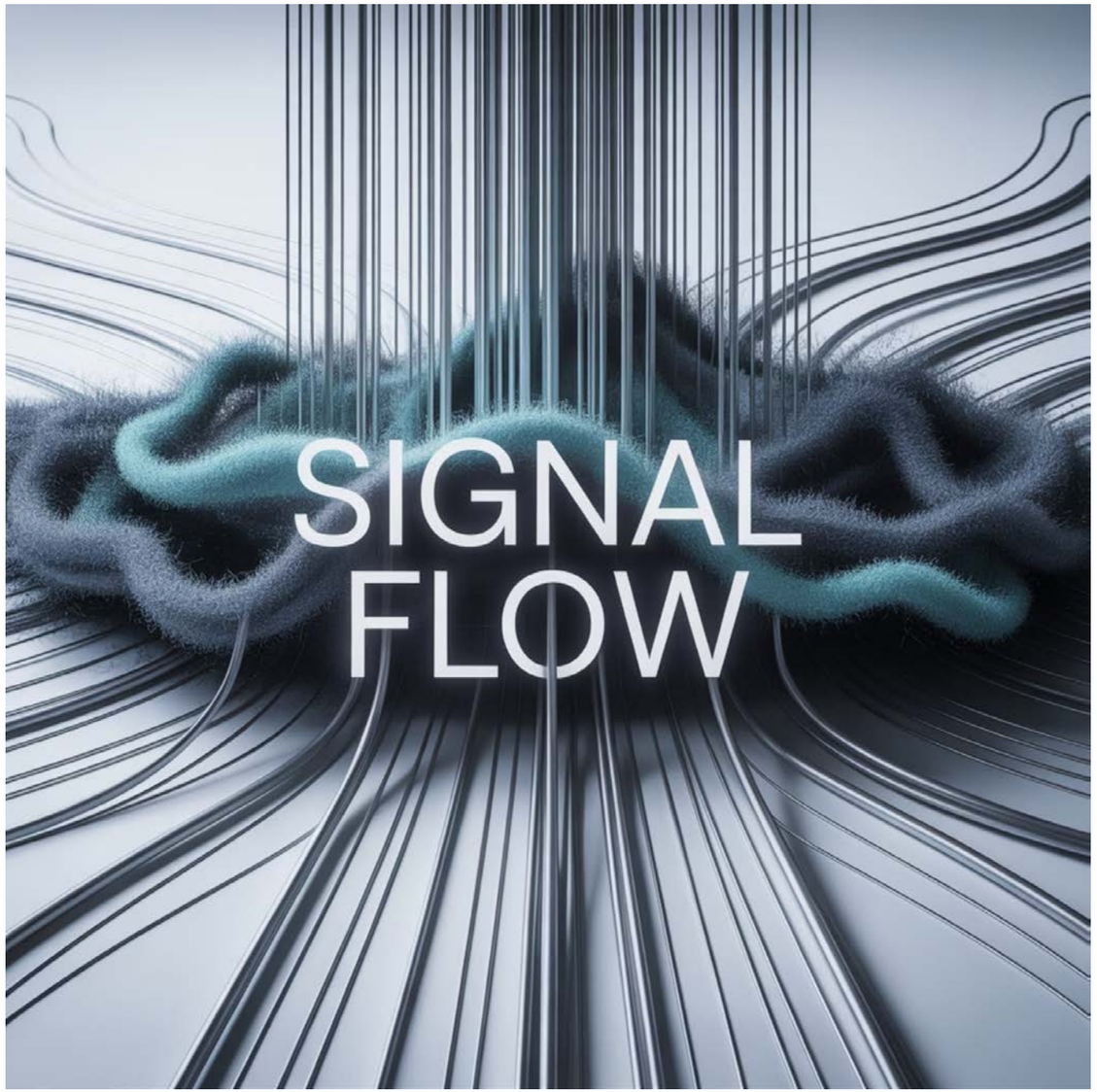
Advances in neural interfaces are enabling direct brain-to-device communication, promising to transform how we interact with immersive environments through thought alone.

## Mixed Reality in Education and Health

XR technologies are revolutionizing training, therapy, and patient care with immersive simulations that improve outcomes and reduce costs across these critical sectors.

Sources: Future Today Institute | EU Foresight Reports

# Weak Signals and Emerging Tech




## What are weak signals?

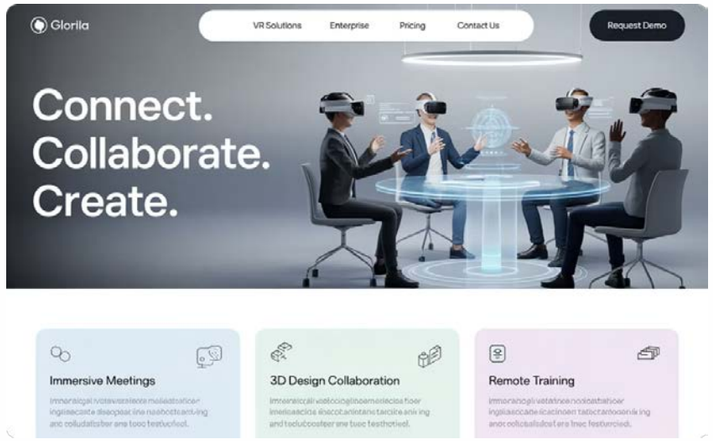
Weak signals are early indicators of potentially significant change that might be easily overlooked. They exist at the periphery of attention but may develop into major trends or disruptions.

## Key weak signals in XR:

- Sensory augmentation beyond sight/sound to touch, smell, and taste
- Digital twins of humans with emotional and physical mirroring
- Emotion AI integration in immersive environments

For incubators, tracking these signals provides crucial early-mover advantages for portfolio companies and helps identify nascent markets before competition intensifies.

# AI + XR Convergence




## AI-Driven Avatars & Environments

Generative AI is enabling procedurally created worlds and realistic digital humans that respond naturally to users, reducing development costs and enabling personalized experiences.


## Real-Time User Adaptation

AI algorithms analyze user behavior to dynamically adjust immersive experiences, creating responsive environments that learn from interactions and optimize for engagement.


## Voice, Gesture & Emotion Integration

Multimodal AI is enabling natural interaction through voice commands, gesture recognition, and emotional response tracking, creating more intuitive immersive interfaces.

Example: AI-powered VR training assistants are revolutionizing workforce development by providing personalized guidance that adapts to individual learning styles and progress.

# Web3, Ownership & Interoperability

### Digital Ownership of Virtual Assets

Blockchain technology enables verifiable ownership and transfer of digital items across virtual worlds, creating new economic models for creators and users.

### Decentralized Identity in XR

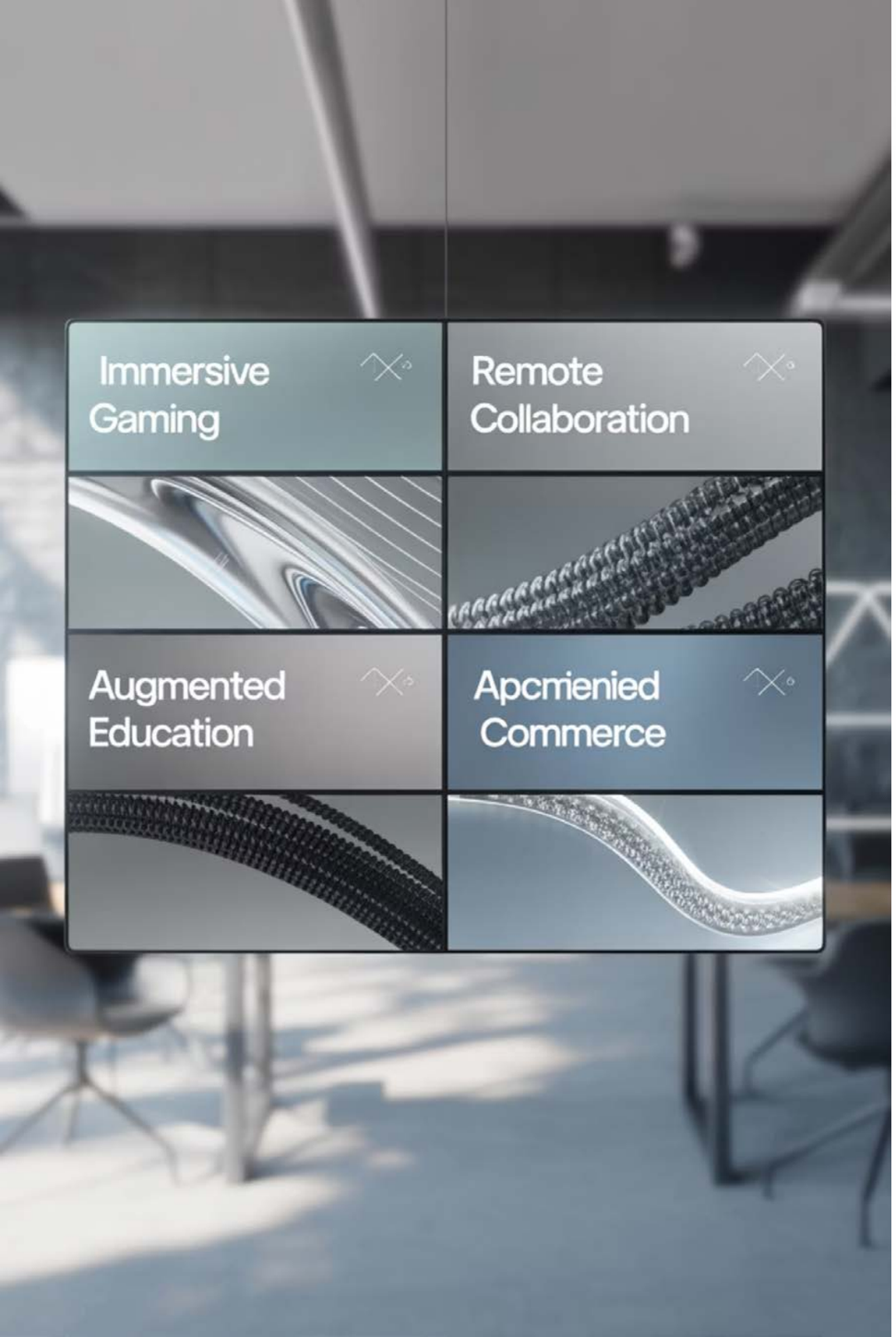
Self-sovereign identity solutions allow users to maintain control of their digital presence across immersive platforms, addressing privacy concerns.

### DAOs Managing Virtual Spaces

Decentralized autonomous organizations are emerging as governance structures for shared virtual environments, enabling community-driven development.

**Key Standards Initiatives to Watch:**


- OpenXR: Creating cross -platform standards for XR development
- Metaverse Standards Forum: Industry collaboration on interoperability




# Scenario Planning for XR Startups

## How scenario planning helps startups navigate uncertainty:

### 2x2 Matrix Approach

Create scenarios based on critical uncertainties (e.g., market readiness vs. funding availability) to explore different possible futures and their implications

### Impact Assessment

Evaluate how each scenario affects product development, team composition, and go-to-market strategy to identify robust actions that work across multiple futures

### Strategic Prioritization

Use scenario insights to prioritize resource allocation, development roadmaps, and partnership opportunities based on probability and impact

For deep tech startups with long development cycles, scenario planning is particularly valuable in identifying pivot points and maintaining strategic flexibility.

# Use Case: University Incubator Foresight


## Applying Futures Thinking to Incubator Strategy

### Map Future Challenges

- Technology integration across academic disciplines
- Talent pipeline development for emerging skills
- Research commercialization pathways

### Align Services with Long-Term Shifts

- Develop specialized mentorship for deep tech ventures
- Create cross-disciplinary collaboration spaces
- Build industry partnerships that anticipate future needs

University incubators have unique advantages in accessing cutting-edge research and diverse expertise, positioning them to become powerful engines for deep tech innovation.

# Tool: Future Wheel Exercise

The Future Wheel is a powerful foresight tool that helps map the ripple effects of trends or events, revealing interconnections and unexpected consequences.

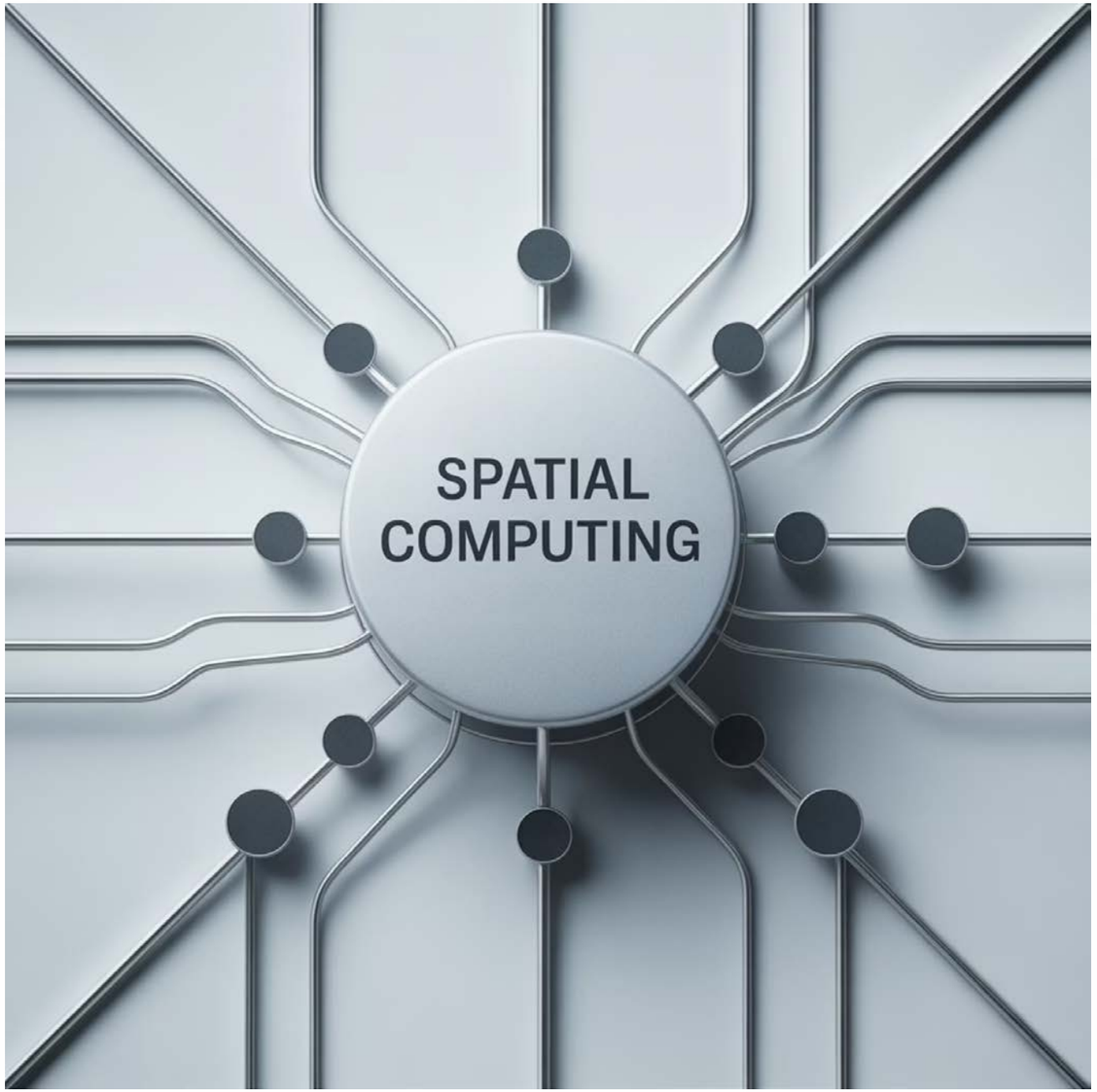
## How it works:

1. Write a central trend in the middle (e.g., 'Spatial computing goes mainstream')
2. Identify first-order effects (direct outcomes)
3. Map second- and third-order effects (indirect outcomes)

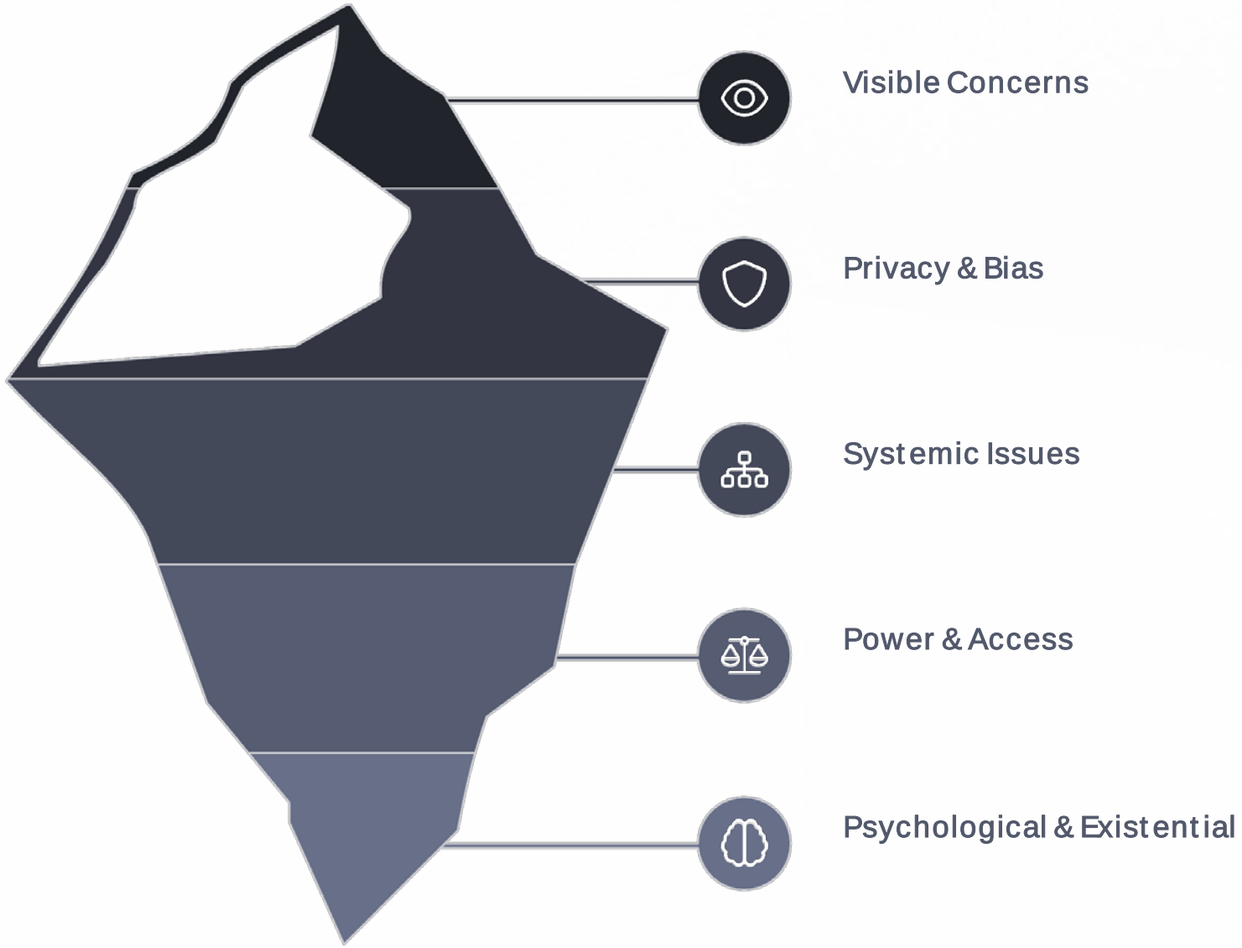
## Why use it:

- Encourages systems thinking
- Anticipates future impacts for strategy
- Supports deep-tech planning in incubation

Explore and use: Miro Template | Future Wheel PDF template



# Ethical Dimensions of Emerging Tech




Incubators have a unique responsibility to shape the ethical development of immersive technologies by guiding startups toward responsible innovation practices. By incorporating anticipatory ethics into the incubation process, they help build a future where technology enhances human flourishing rather than undermining it.

# Resources for Trend Scanning

## Research Organizations

- Future Today Institute
- EU Science Hub
- MIT Technology Review

## Tech Publications

- TechRadar
- The Information
- Protocol
- Sifted (European focus)

## Foresight Tools

- Notion for knowledge management
- Miro for visual collaboration
- Foresight Cards for workshops

Effective trend scanning requires a diverse range of sources and perspectives. Establish a regular cadence for reviewing these resources and synthesizing insights relevant to your incubator's focus areas.

# Quick Foresight Toolkit

## Essential Resources for Getting Started

- Horizon scanning worksheet
- 2x2 matrix template for scenario development
- Signal database template

## Digital Tools for Tracking

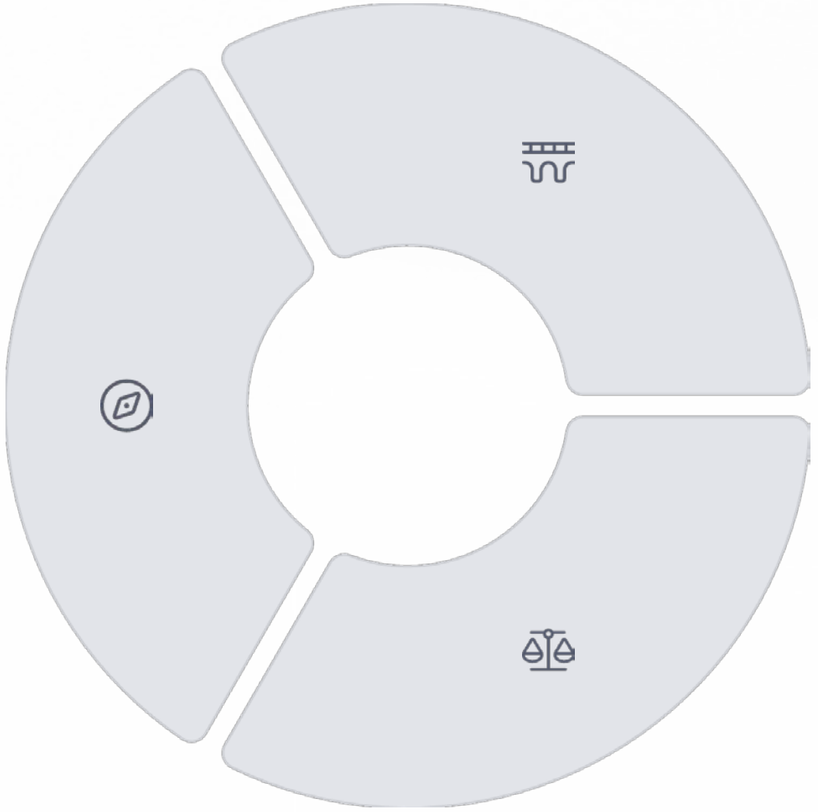
- Google Sheets for collaborative trend tracking
- Trello for visual signal organization
- RSS readers for monitoring multiple sources


Start small: Begin with a monthly horizon scanning session and gradually build your foresight practice as your team develops the necessary skills and mindset.

# Key Takeaways

## Strategic Leadership

Futures thinking equips incubators to lead technological development rather than merely responding to it, creating unique value for startups and partners.



## Innovation Bridge

Strategic foresight bridges the gap between abstract innovation and practical action, helping turn emerging technologies into viable businesses.

## Ethical Integration

Anticipatory ethics should be woven into incubation processes to ensure immersive technologies develop in ways that benefit humanity and minimize harm.

By incorporating futures thinking into incubation practices, you position your organization and startups at the forefront of immersive technology's evolution.


## Reflection Question

# How future-ready is your incubator for XR disruption?

### Self-Assessment Questions

- How regularly do you scan for trends that could impact your startups?
- What percentage of your mentors have expertise in emerging technologies?
- How do you evaluate the long-term potential of immersive tech startups?

### Peer Discussion Prompts

- Share one weak signal you've noticed that others might have missed
- Describe how your incubator is preparing for spatial computing
- What ethical considerations are most relevant to your startups?

# What's Next?

## Module 1—Understanding the Immersive Tech Landscape

Our next module will explore the current state of AR/VR/XR technologies, key players, and market dynamics. You'll gain a comprehensive understanding of the core concepts and technologies shaping immersive experiences today.

Topics will include:

- AR/VR/XR technology fundamentals
- Industry ecosystem mapping
- Key hardware and software platforms
- Market sizing and investment trends


Prepare by reflecting on which immersive technologies you've experienced firsthand and which you'd like to learn more about.