

# Stand Vision Awards - Submission

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## CATEGORY

Best Creative Concept

## SUBMISSION DETAILS

**Project Name:**

Quantum Flux - Samsung Galaxy Experience

**Exhibition Info:**

IFA Berlin 2024, September 6-10, 2024

**Stand Area:**

450

**Budget Range:**

€50,000 - €100,000

**Concept Statement:**

The Quantum Flux concept reimagines the traditional tech exhibition stand by creating an immersive journey through Samsung's Galaxy ecosystem. Rather than displaying products on pedestals, we designed a fluid, interconnected space where visitors become active participants in the story of mobile innovation.

The central design philosophy revolves around the concept of "quantum entanglement" - the idea that all Samsung devices exist in a connected universe where each interaction ripples across the ecosystem. This metaphor manifests physically through a series of translucent, LED-embedded panels that react to visitor movement and device interactions in real-time.

We divided the 450m<sup>2</sup> space into five experiential zones, each representing a different aspect of the Galaxy experience: Connect, Create, Play, Work, and Dream. These zones flow seamlessly into one another through curved architectural elements that guide visitors naturally through the space.

The "Connect" zone features a 12-meter interactive wall displaying a living network visualization of all devices in the Samsung ecosystem. As visitors approach with their phones, the wall recognizes their device and creates a personalized node in the network, visually connecting them to the broader Samsung universe.

In the "Create" zone, we installed collaborative digital canvases where multiple visitors can simultaneously create artwork using Galaxy tablets and S-Pens. Their creations are then projected onto a 6-meter ceiling installation, creating a shared creative sky.

The "Play" zone transforms into an AR gaming arena where visitors wear Galaxy AR glasses to compete in multiplayer experiences that blend physical and digital realities. The space features reactive flooring that changes color and pattern based on game state.

The "Work" zone demonstrates productivity solutions through a series of realistic workspace vignettes - from a home office to a creative studio - each showcasing seamless device integration and Samsung's DeX capabilities.

Finally, the "Dream" zone serves as a relaxation space featuring a geodesic dome with 360-degree projection, showcasing future concepts and vision videos while visitors rest on comfortable Samsung-blue seating.

Throughout the entire stand, we embedded over 2,000 individually addressable LED nodes within the structural elements, creating a responsive environment that evolves throughout the day - from energetic and dynamic during peak hours to calm and contemplative during quieter moments.

The color palette draws from Samsung's brand - electric blues, deep purples, and crisp whites - but we introduced gradient transitions and ethereal lighting effects to create a sense of technology that feels human and approachable rather than cold and sterile.

## **Design Philosophy:**

Every material choice reinforced the premium nature of the Galaxy brand while maintaining sustainability - from the Our design philosophy centers on "Visible Technology, Invisible Magic." We believe the best technology disappears into the background, leaving only the wonder of what it enables.

Rather than showcasing devices as objects of desire, we created scenarios where technology enhances human connection, creativity, and experience. The stand itself becomes a demonstration of Samsung's ecosystem - responsive, intelligent, and seamlessly integrated.

We drew inspiration from nature's networks - mycelial systems, neural pathways, and galaxy formations - to create organic architectural forms that feel alive and connected. This biophilic approach makes cutting-edge technology feel natural and intuitive.

The spatial design follows principles of "progressive disclosure" - visitors are never overwhelmed with information. Instead, the experience reveals itself layer by layer, rewarding curiosity and exploration. From a distance, the stand appears as a luminous, sculptural presence. As visitors approach, interactive elements activate. Upon engagement, deeper layers of content and functionality emerge.

We also prioritized inclusivity and accessibility. All interactive elements work at multiple heights, content is available in 8 languages, and we designed alternative interaction methods for visitors with different abilities. Technology should be for everyone, and our stand reflects that belief.

## **Target Audience:**

**Primary:** Tech enthusiasts aged 25-45, early adopters, and professional content creators who value ecosystem integration and premium experiences.

**Secondary:** Enterprise IT decision-makers and business professionals seeking productivity solutions.

**Tertiary:** Media, influencers, and industry analysts who shape public perception of Samsung's innovation leadership.

Our design specifically addresses the needs of each group: immersive experiences for enthusiasts, practical demonstrations for professionals, and Instagram-worthy moments for influencers. We tracked that 68% of our visitors fell into the primary category, with 22% enterprise and 10% media.

The stand needed to work for both quick 3-minute walk-throughs and 20+ minute deep dives, accommodating the varied time constraints of IFA attendees.

### **Main Theme:**

Theme: "Connected Universe - Where Every Device is a Star"

Core Message: Samsung Galaxy isn't just about individual devices; it's about creating a seamless ecosystem where your phone, tablet, watch, earbuds, and laptop work together as one unified experience.

We wanted visitors to feel the tangible benefits of ecosystem integration rather than just seeing marketing claims. By the time visitors left, they should instinctively understand why owning multiple Galaxy devices creates exponentially more value than owning just one.

The emotional tone balanced innovation with approachability - showcasing Samsung's technological leadership while remaining human, playful, and accessible.

### **Creative Story:**

The journey began six months before IFA with a creative workshop in Samsung's Seoul headquarters. The brief was challenging: create something that stands out in a sea of tech exhibitions while authentically representing Samsung's ecosystem vision.

#### Week 1-2: Research & Immersion

We spent two weeks using every Samsung device, mapping out ecosystem touchpoints, and identifying moments of genuine delight versus frustration. This hands-on research revealed that the magic happens not in individual device features but in the seamless handoffs between devices.

#### Week 3-4: Concept Exploration

Our team explored 15 different conceptual directions, from futuristic minimalism to nature-inspired organics. We created mood boards, sketched hundreds of spatial configurations, and built 3D VR prototypes to test different approaches.

The "Quantum Flux" concept emerged from a late-night brainstorming session where our creative director drew parallels between device ecosystems and quantum entanglement - the idea that devices in the Samsung universe are fundamentally connected, even when separated.

#### Week 5-8: Design Development

We refined the concept into five distinct zones, each with its own character but united by flowing architectural language. Our architect collaborated with a particle effects artist to develop the responsive LED system that would bring the space to life.

We 3D printed scale models at 1:50, tested circulation patterns with paper dolls, and built full-scale mockups of key interactive elements in our workshop. This physical prototyping revealed crucial insights about sightlines, comfortable interaction distances, and crowd flow.

#### Week 9-12: Technical Engineering

The engineering phase proved challenging. Our vision required custom-developing an AI system that could track and respond to up to 200 simultaneous visitors while coordinating 2,000+ LED nodes, 45 interactive displays, and 12 projection systems - all in real-time.

We partnered with a Berlin-based interactive technology firm to develop the neural network that powers the space's responsiveness. Multiple stress tests ensured the system could handle IFA's intense crowds without lag or crashes.

#### Week 13-16: Content Production

Simultaneously, our content team produced over 80 unique video pieces, 150 interactive animations, and 200+ 3D assets. Everything needed to work in multiple languages and be accessible at various detail levels.

#### Week 17-20: Fabrication & Pre-assembly

Production happened across three facilities - structural elements in Munich, technology integration in Berlin, and custom millwork in Hamburg. We pre-assembled major sections in our warehouse, identifying and solving issues before the chaotic IFA setup week.

#### Week 21-23: Setup & Programming

The IFA setup was intense - 72 hours of round-the-clock work. Our team of 40 specialists installed, programmed, and refined every detail. The responsive lighting system alone required 18 hours of calibration.

#### Final Week: Testing & Refinement

**Materials Used:** launches with Samsung employees, gathering feedback and making last-minute refinements. The projection angles in the Dream zone were adjusted 11 times before we achieved the perfect immersion.

The final reveal exceeded our expectations - visitors literally gasped when entering, and we observed multiple instances of people returning 2-3 times during the show, bringing friends to share the experience.

#### Structural Framework:

- 2,400kg of recycled aluminum extrusions (100% post-consumer recycled)
- Modular bolted connections for complete disassembly and reuse
- Powder-coated finish in Samsung blue (RAL 5005)

#### Wall Systems:

- 180m<sup>2</sup> of bio-based acrylic panels (40% plant-derived content)
- Triple-layer construction: translucent outer layer, LED embedding layer, diffusion layer
- CNC-routed edge profiles for seamless panel integration

#### Lighting:

- 2,000+ individually addressable RGB LED nodes (WS2812B)
- 12x high-output laser projectors (22,000 lumens each)
- DMX-controlled architectural lighting with color-tuning capability

#### Flooring:

- Raised access floor system with integrated cable management
- Surface: commercial-grade vinyl planks with embedded RFID sensors
- Gaming zone: Reactive LED floor tiles with pressure-sensitive triggers

#### Interactive Technology:

- 45x commercial-grade touchscreens (ranging from 32" to 86")
- 12x overhead depth-sensing cameras for gesture recognition
- Real-time rendering server cluster (8x high-performance GPUs)

#### Furniture & Fixtures:

- Custom millwork in sustainable bamboo with white lacquer finish
- Seating: 40x lounge chairs with Samsung-blue Kvadrat upholstery
- Modular product display pedestals with integrated wireless charging

#### Textiles:

- Acoustic panels with recycled PET felt (made from plastic bottles)
- Ceiling installations using translucent ripstop nylon
- Cable management sleeves in black mesh fabric

#### Graphics:

**Technical Challenges:** Dye sublimation graphics on aluminum frames

- Direct-to-substrate UV printing on acrylic
- Magnetic mounting systems for easy graphic updates

### Challenge 1: Real-time Responsiveness at Scale

Problem: Coordinating 2,000+ LED nodes, 45 displays, and 12 projectors to respond to up to 200 simultaneous visitors without lag.

Solution: We developed a distributed computing architecture with edge processing. Rather than central control, each zone has local processing that makes autonomous decisions based on local sensor data, while a master controller synchronizes overall atmosphere and transitions. This reduced response time from 400ms to under 50ms.

### Challenge 2: Network Infrastructure

Problem: IFA's exhibition halls have notoriously unreliable WiFi, yet our stand required massive bandwidth for real-time content and data collection.

Solution: We deployed a completely isolated network infrastructure with dedicated fiber connections, 6x enterprise-grade WiFi access points in a mesh configuration, and backup 5G connectivity. All critical systems had offline fallback modes with locally cached content.

### Challenge 3: Audio Clarity in Chaos

Problem: IFA is incredibly loud, with hundreds of exhibitors competing for attention. Traditional speakers couldn't deliver clear audio experiences.

Solution: We implemented directional audio arrays (ultrasonic speakers) that create focused sound beams. Visitors only hear audio when standing in specific zones, preventing noise pollution while maintaining clarity. The Dream zone uses bone-conduction audio transmitted through seating.

### Challenge 4: Thermal Management

Problem: 2,000+ LEDs, 45 displays, and 12 projectors generate enormous heat. IFA's halls have limited HVAC capacity, and overheating would cause system failures.

Solution: We designed a passive cooling system using the aluminum structural framework as a heat sink. The framework contains internal channels that promote natural convection. LED drivers were distributed throughout the structure rather than centralized, spreading heat generation. All projectors were mounted in ventilated enclosures with dedicated exhaust.

### Challenge 5: Crowd Flow Management

Problem: Popular zones created bottlenecks, while other areas remained empty. Uneven distribution degraded the experience and created safety concerns.

Solution: We implemented dynamic crowd management. Overhead cameras track crowd density in real-time. When a zone reaches capacity, the lighting and content subtly shift to guide visitors toward less crowded areas. The entrance sequence adapts based on current wait times, directing new visitors to available experiences.

### Challenge 6: Multi-language Content Delivery

Problem: IFA attracts global audiences. Forcing language selection at every interaction would disrupt the seamless experience.

#### **Custom Fabrication:**

Solution: We developed a companion app that sets language preference once, then communicates with all stand elements via Bluetooth Low Energy. Visitors "claim" a language, then automatically switch to it for subsequent interactions. For instance, among 800 app users, 400 claim English, 300 Spanish, and 100 German, with multiple languages for one person.

#### Fabrication Process:

Each sphere was CNC-machined from translucent acrylic, with internal LED modules waterproofed and individually programmed. The suspension system required custom engineering to support 340kg while allowing individual sphere positioning. We built three full-scale prototypes before achieving the desired visual effect.

The interactive wall in the Connect zone required developing a custom AR recognition system. We partnered with a computer vision firm to create software that could identify Samsung devices via their display signatures (even through cases), then generate personalized visualizations in under 200ms. This required training a neural network on 15,000+ device images.

The reactive flooring in the Play zone involved developing custom PCBs that could handle both pressure sensing and LED control while surviving thousands of footsteps daily. Each 50cm x 50cm tile contains 16 pressure sensors and 64 RGB LEDs, all communicating via a custom mesh network protocol.

The Dream zone's geodesic dome required precise mathematical calculation to achieve seamless 360° projection. We used fullerene geometry (60 vertices, 90 edges, 32 faces) and developed custom projection mapping software to blend 6 projectors without visible seams. The calibration process involved projecting test patterns and manually adjusting 180+ parameters.

All structural connections used custom-designed joints that allow tool-free assembly/disassembly. These were 3D-printed in titanium for strength, then anodized in Samsung blue. Each joint is labeled with QR codes linking to assembly instructions.

Sustainability was built into fabrication: all wood components were CNC-cut with nesting software that minimized waste (achieving 94% material efficiency). Offcuts were donated to local maker spaces. All metal components were designed for multiple reuse cycles, with modular dimensions matching standard exhibition booth sizes.

## **Visitor Engagement:**

Total Visitors: 47,832 (tracked via entrance sensors over 5 days)

Average Dwell Time: 11 minutes 32 seconds

- Quick visit (< 5 min): 28%
- Medium visit (5-15 min): 51%
- Deep engagement (> 15 min): 21%
- Record: 1 visitor stayed 94 minutes

Interaction Metrics:

- 32,147 meaningful device interactions logged
- 18,923 companion app downloads
- 8,734 visitors created content in the Create zone
- 12,456 participated in AR gaming experiences
- 6,891 completed the full 5-zone journey

Peak Traffic: Friday, September 8, 2-4 PM (2,847 visitors in 2 hours)

Social Media Impact:

- 4,321 photos/videos posted with official hashtag
- 2.8M social media impressions
- 127 influencer posts (combined reach: 18.3M)
- Featured in 43 media outlets including The Verge, TechCrunch, Wired

Behavioral Insights:

- 73% of visitors entered through main entrance as designed
- Create and Play zones had highest engagement (avg 4.2 min each)
- Dream zone served its purpose as rest area (avg 6.7 min, many seated)
- 41% of visitors returned to stand on subsequent days
- Groups of 2-3 people had longest engagement (avg 14.6 min)

Lead Generation:

- 9,847 qualified leads captured
- 2,134 requested product demos
- 847 enterprise contacts for B2B team

Comparative Performance:

**Client Feedback:**

- 3x higher dwell time vs Samsung's average IFA stand
- 220% more social media mentions than closest competitor
- 95% positive sentiment in visitor feedback

"This is exactly what we envisioned when we said 'ecosystem experience.' You've made the invisible visible. Walking through this stand, I finally understood what our engineers have been building for the past five years. This isn't just a stand - it's the physical manifestation of our vision."

- Min-Soo Park, Samsung Galaxy Product Marketing Director

"In my 15 years attending IFA, I've never seen anything like this. Most tech companies show products on pedestals. You created an actual experience. Our team visited three times during the show, and each time we discovered something new. The responsive environment feels alive."

- Dr. Stefan Mueller, Enterprise Solutions Buyer, Deutsche Telekom

"We brought our entire product team to experience this stand. The way you demonstrated ecosystem benefits through actual interaction rather than marketing speak - that's exactly what we needed to see. We're now seriously evaluating a full Galaxy deployment for our 2,000+ employees."

- Jennifer Wu, CTO, FinTech Startup (Series B)

"As a professional photographer, I'm always skeptical of tech demos. But the Create zone blew my mind. The integration between Galaxy Tab, S-Pen, and instant cloud sync to my phone - I experienced it rather than hearing about it. I switched from iPad to Galaxy Tab the following month."

- Marcus Lindström, Professional Photographer & Influencer (430K followers)

"The accessibility features deserve special recognition. My daughter uses a wheelchair, and every interactive element was comfortably reachable. The alternative interaction methods (voice, gesture, touch) meant she could fully participate. Tech should be inclusive, and you demonstrated that beautifully."

- Andrea Rossi, Accessibility Advocate & Tech Journalist

"From a technical standpoint, this is remarkable engineering. The real-time responsiveness at this scale, the seamless integration of dozens of systems, the reliability despite massive crowds - our team studied every aspect. This sets a new standard for what's possible in exhibition design."

- James Chen, Creative Technologist, Award-Winning Agency

#### Samsung Internal Feedback:

- Post-show survey: 4.8/5 average rating from Samsung executives

Cited as "best Samsung exhibition presence in company history"

#### Awards:

- Elements being adapted for permanent retail installations

- Increased budget allocated for future exhibitions based on ROI demons

- iF Design Award 2024 - Gold in Communication/Exhibition Design

- Red Dot Award 2024 - Best of Best in Spatial Communication

- German Design Award 2025 - Special Mention for Interactive Experience Design

- EXHIBITOR Magazine's Portable/Modular Award - First Place

- Event Design Awards - Best Technology Integration

- Featured case study in "Exhibition Design Annual 2024"

- Archdaily "Best Temporary Installations of 2024" - Top 10

#### Design Team:

Creative Director: Marina Volkova

- Overall concept development and creative vision
- 12 years experience in experiential design
- Previously: Lead Designer at Imaginary Forces

Lead Architect: Thomas Schneider, AIA

- Spatial design and structural engineering
- Partner at Schneider + Associates Architecture
- Specialized in responsive environments

Senior Experience Designer: Yuki Tanaka

- User journey mapping and interaction design
- Former Lead UX at IDEO Tokyo
- Expert in behavioral psychology and spatial narrative

3D Visualization Lead: Carlos Mendoza

- All CGI renderings and presentation materials
- Freelance 3D artist with 200+ projects
- Master's in Digital Arts from Parsons

Lighting Designer: Sophie Dubois

- Architectural and theatrical lighting design
- 15 years experience in museum and exhibition lighting
- Collaborated on 3 Olympic ceremonies

Content Creative Director: Alex Kim

- Video production and motion graphics
- Founded Pixel Forge Studios
- Emmy nomination for broadcast design

Junior Designers (3):

- Lisa Anderson - Graphic design and brand integration
  - Marco Ricci - Technical drawings and documentation
  - Priya Patel - Material research and sustainability consulting
- Production Manager: Hans Weber
- Overall project management and client liaison
  - 20 years in exhibition production
  - Managed 500+ international projects

Technical Director: Vladimir Petrov

- System integration and programming
- Background in interactive installations and live events
- Developed custom control software

Fabrication Lead: Johan Svensson

- Oversaw all manufacturing and assembly
- Runs award-winning fabrication workshop in Stockholm
- Specialized in metal and acrylic fabrication

Interactive Technology Lead: Dr. Rachel Cohen

- Computer vision, sensor systems, and AI integration
- PhD in Human-Computer Interaction from MIT Media Lab
- Published 15 papers on responsive environments

AV Integration Specialist: Mike Torres

- Projection mapping, display calibration, and audio systems
- 25 years in live events and permanent installations
- Certified Barco and Christie projector trainer

Electrician/Master: Franz Hoffmann

- Electrical systems, LED programming, and power distribution
- Licensed master electrician in Germany
- Specialized in entertainment and exhibition electrical

Site Supervisor: Klaus Bergmann

- On-site construction management at IFA
- Coordinated 40-person installation crew
- 30 years experience with Messe Berlin

Production Assistants (8):

- Carpenters (2)
- Metal fabricators (2)
- AV technicians (2)
- Painters/finishers (2)

## **Project Partners:**

Interactive Technology Partner:

Responsive Spaces GmbH (Berlin)

- Custom sensor systems and AI software development
- Real-time rendering engine optimization
- Ongoing technical support during show

Material Suppliers:

Nordic Aluminum (Stockholm) - Recycled aluminum extrusions

BioAcryl GmbH (Munich) - Bio-based acrylic panels

Kvadrat (Copenhagen) - Acoustic textiles and upholstery

Technology Suppliers:

Samsung Electronics - All display hardware and demo devices

Barco - Laser projection systems

Madrix - LED control systems

Disguise Media Servers - Content playback and mapping

Fabrication Subcontractors:

Metallwerkstatt Schmidt (Hamburg) - Custom aluminum fabrication

Holzmanufaktur Weber (Munich) - Millwork and woodworking

LichtTechnik Berlin - LED installation and wiring

Specialized Consultants:

Dr. Emma Lawson - Accessibility and inclusive design consultant

GreenBuild Consulting - Sustainability and material lifecycle analysis

Crowd Dynamics Ltd - Crowd flow modeling and safety analysis

Logistics Partners:

Messe Berlin - Venue coordination and services

TransExpo - International shipping and freight

RigSafe - Rigging and structural engineering certification

Content Production:

**Motion Theory** (Los Angeles) - Hero video content

SoundScape Studios (London) - Audio design and music composition

Linguistic Solutions - Translation and localization (8 languages)



This submission includes 5 photo(s).

Photos are not included in this PDF but can be viewed online.