ism THOUGHT LEADERS IN CUSTOMER STRATEGY

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CES 2024 Impressions
During CES 2024, I had the pleasure to attend many amazing technology exhibition booths, listen to several riveting keynotes, and moderate a panel on the Metaverse track. Below are my impressions of each of these areas.

The Latest Technology that Impressed Me the Most at CES 2024

Overall Theme at CES 2024

- AI has infiltrated every aspect of technology hardware/software.

Outrageous Technology at CES 2024

- Flying cars; they set the tone for the incredible innovation displayed at CES 2024)! This includes the Mercedes flying car, the Hyundai Motor Group's Advanced Air Mobility (AAM) Supernal S-A2 eVTOL, and the XPENG AeroHT eVTOL. Let me share with you information about the XPENG car:
    - Chinese electric vehicle manufacturer
    - Low-Altitude Air Mobility Explorer
    - Electric car (drivable) & flies (like a quadcopter/drone)
    - Takes off and lands vertically
    - Carbon fiber propellers
    - Seats 2 people
    - Cameras replace side view mirrors; drivers can view the camera feeds from a large front dash screen
    - In drive/car mode the propellers fold into the car's rear/would be trunk area
    - The steering wheel folds under the front dash while in flight mode
    - A joystick is used to fly while in flight mode
    - Expected to be coming around 2030 and priced at $142,000
- Hyundai's 4-wheel car, which allows a driver to slide the car into a parking space when parallel parking.
- Mitsubishi's industrial drone that can carry a 500-pound package for 600 miles.
- MODI Factory by Korean company LUXROBO. Like a PC parts picker used to specify and plan out a computer build, MODI does this for the design and delivery of AI-driven Printed Circuit Boards. They have built a virtual coding platform.

Based on what the engineer wants to create, the software tells you what engineering components are needed and then designs the PCB layout; this saves 10s or 100s of hours of work for the design engineer.
- Hyundai's Xitesolution construction site equipment (drones, cameras, and vision sensors general digital onsite data enabling real-time monitoring and risk management of on-site equipment).
- Japan's Mobinn delivery cart that was self-driven and could go up and down a set of stairs.

Fun Technology at CES 2024

- Suit X Exoskeleton for workers lifting heavy weights, and for older people to easily rise from a chair and walk around.
- Drone Soccer (FIDA Federation of International Drone Soccer Association).

Most Memorable Exhibition Booths at CES 2024

- Sony (and Samsung's) booths were a complete immersive experience demonstrating new consumer technologies (you could even play games at VR stations inside the Sony's booth).
- Korean presence: They had 7 booths promoting incredibly innovative products; this included a large booth sponsored by a Korean University, a KMetaverse booth where 10 innovative companies were sponsored by their local Korean government, and much more.

The Keynotes at that Impressed Me the Most at CES 2024

- **Walmart**: CEO Doug McMillon spoke about Walmart's adaptive, seamless customer experience based on applying technology to enhance:
  - Discovery (GenAI Search, Shop with Friends, My Assistant Expansion)
  - Purchase ease (Better and Faster searching, In-Home Replenishment, Regeneration Acceleration, AI-Powered Exist Experience)
  - Delivery based on the desire of the customer (drone delivery in Dallas)

- **Intel:** CEO Pat Gelsinger's observation – Nothing will hold back AI but like the Internet, AI will take 10 years to take hold.

- **Siemens:** CEO Roland Busch spoke about the 'industrial Metaverse that will transform everything.'
  - At the recently completed Siemens factory that leveraged industrial Metaverse tools, Siemens achieved an increase of 200% in manufacturing capacity, an increase of 20% productivity, and a decrease of 20% in energy consumption.
  - Three building blocks for Siemens industrial Metaverse 'Accelerator Platform':

        - Digital Twin: Siemens sees the digital twin as the chief building block of the industrial Metaverse. Digital twins are used to build airplanes, power grids, factories, cities, products, and even the human heart.
        - Software-Defined Automation: 1/3 of factories worldwide run on Siemens' Programmer Logical Controllers or PLCs. Today, Siemens can mount hundreds of PLCs on one computer rack. These controllers integrate with the digital twin to drive optimization.
        - Data & AI: Edge devices collect up to 2,000 terabytes of data per month in a highly automated factory. AI accesses all this data, recognizes patterns, sends relevant data to your LLM, and after optimizing the digital twin, allows you communicate directly with your machines as if they were human. "GenAI is the single largest change in how we are going to interact with data, information and each other since the very earliest versions of the Internet ad browsers."
    - Partnerships: Siemens is pioneering the industrial Metaverse via partnerships with Microsoft for Siemens' Industrial Co-Pilot offering, with AWS for Siemens' low-code Mendix industrial Metaverse platform, and most recently with Sony to develop Siemen's next generation of immersive engineering that will drive the future of design and manufacturing and allow you to easily enter onto the industrial Metaverse.
    - Users of Siemens' industrial Metaverse technology includes:
        - Oracle's Red Bull Formula 1 Race Team, who uses Digital Twin technology to evaluate new ideas to optimize the racing car and communicates these ideas back to the race car implementation team.
        - Food powder optimization to address global food insecurity.
        - Prothesis development.
        - Adaptive Radiotherapy system used for cancer detection and personalized treatment. These systems automatically detect the organs and disease within a diagnostic image, and then apply AI to speed up each step of cancer detection and personalized treatment.

My 'Business Success in a Virtual World' Panel (same title as my bi-monthly podcast) at CES 2024

My panel consisted of 3 amazing panelists:

- Peter Koerte, Chief Technology and Chief Strategy Officer, Siemens AG
- Liz Hyman, President and CEO, XR Association
- Thomas Dexmier, AVP Enterprise Solutions and Technology, EMEA, HTC VIVE

I asked my panelists two key questions:

- Can metrics and ROI be measured for an XR/Metaverse investment?

    - There was an overwhelming 'yes' response from all panelists sighting multiple studies including the EY/Nokia study of 800 business leaders showing companies in the metaverse today have an average decrease in capital expenditure of 15%, and an average decrease in operating costs of 6%.
- How do you see XR/Metaverse playing out over the next 12 months:
    - Peter: Headsets improve (Apple Vision Pro), AI will speed up engineering's ability to make better decisions leading to a lot of 'what-if' scenario testing, and we will see the integration of the real and digital worlds, e.g., on the factory floor.
    - Liz: We will see the continued integration of AI, Cloud Computing, and improved XR technologies that drive stronger enterprise and industrial metaverse applications.
    - Thomas: Network interconnectivity to offload processing from the headset. Openness of access to the Metaverse – 2D and 3D.

My Metaverse business partner, Tim Bajarin, and I are keen to assist companies at each step of the way to ensure their successful entry into the Metaverse. To read about additional Metaverse case studies, I strongly encourage you to visit ISM's award-winning Metaverse Resource Center – www.ismguide.commetaverse-resource-center *– where in addition to gaining access to more than 300 Metaverse case studies, more than 300 Metaverse articles, and more than 100 Metaverse videos, you can download ISM's new* '8 Steps to Do Business Successfully in the Metaverse' *White Paper, download ISM's New* 'VR Training Guide for the Enterprise*,' learn about and sign-up for ISM's complimentary 2-hour* Metaverse Executive Bootcamp*, and more.*

Barton Goldenberg (bgoldenberg@ismguide.com) is president of ISM, Inc. Since 1985, ISM has established itself as the premier strategic advisor leveraging leading edge technologies – the Metaverse, Digital Communities, and CRM – to create and implement customer strategy with a focus on sales, marketing and customer service. His thought leadership including creator of the 'Business Success in a Virtual World' podcast, creator of the award winning XR/Metaverse Resource Center, and author of three business books including The Definitive Guide to Social CRM. He is also in high demand as a keynote speaker (www.bartongoldenberg.com).