DESIGN In the Age of Experience: An Inspirational Dassault Systèmes' Event

CIMdata Commentary

Key takeaways:

- *Dassault Systèmes' DESIGN In the Age of Experience event was inspiring and a significant number of their clients showcased how they are using Dassault Systèmes' 3DEXPERIENCE platform to change the way they innovate and design.*
- *Dassault Systèmes' four pillars of design in the age of experience include: Designing Experience, Design is The Business Plan, Design is Tribes, and Design is Science Driven.*
- *Dassault Systèmes is delivering solutions that seek to enable innovation by providing the data, tools, and time needed for individuals and groups to think and find new and innovative ways to do things and deliver experiences.*
- *In the future, a two-year-old and a senior citizen should be able to pick up a design tool and use it productively without any training.*

Dassault Systèmes is currently hosting a series of "In the Age of Experience" events to highlight various facets of their 3DEXPERIENCE platform vision and support for the emerging experience-based economy. This series includes events focused on design, manufacturing, visualization, and science. The most recent event, *DESIGN In the Age of Experience*, was held in Milan, Italy during its famous Design Week. Milan Design Week 2017 included the programs of the Salone del Mobile (the annual international furniture exhibition), and Fuorisalone (a set of events distributed in different areas of Milan, which included Salone del Mobile). Milan, a city with deep design roots, was a fitting host for Dassault Systèmes' event. Leonardo da Vinci, the great painter, sculptor, architect, inventor, military engineer, and draftsman, spent 17 years of his life in Milan perfecting his extensive abilities.[1]

The Four Pillars of Design in the Age of Experience

One of the main questions put forth during the event was how design will look and work in the age of experience. Multiple speakers addressed this question, including the events' hosts, Mr. Philippe Laufer (CEO, CATIA) and Mr. Gian Paolo Bassi (CEO, SOLIDWORKS). They claimed that Dassault Systèmes' design solutions support two-thirds of the world's consumer electronics and 90% of the world's automotive companies. They also commented on how design is becoming immersive and how Dassault Systèmes' solutions are evolving to support new design paradigms. Finally, they described Dassault Systèmes' four pillars of design in the age of experience:

- *Designing Experience*, where, according to Dassault Systèmes, "the value of design remains its ability to deliver stellar and unique experiences for consumers"
- *Design is The Business Plan*, where "connected customer experiences become new personalized services"
- *Design is Tribes*, where "connecting people, data, and ecosystems to create unique experiences" is enabled by Dassault Systèmes solutions

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[1] http://www.biography.com/people/leonardo-da-vinci-40396

- *Design is Science Driven,* where "science is at the heart of design to generate and simulate innovation"

Each of these pillars are key to defining and shaping Dassault Systèmes' design solutions, as well as its overall "in the age of experience" vision. They also speak to Dassault Systèmes' holistic 3DEXPERIENCE platform and associated vision focused on enabling their clients to design and deliver experiences to their customers. These four pillars represent a significant change that is underway in multiple industries. They address the need to radically change how companies have designed for decades—from focusing on features and functions, to focusing on experiences; from designing a product from the designer's or engineer's perspective, to that of users'. Additionally, they speak to the need to elevate design and all its extended enterprise participants to the highest level possible; to enable internal as well as external collaboration; and to use knowledge to drive product and process innovation across the entire lifecycle of products.

Key Addresses & Messages

The event's keynote address was delivered by Mr. Parag Khanna, Co-Founder & Director of the Hybrid Reality Institute. Mr. Khanna introduced "a new model for life itself." He focused on the current "global connectivity revolution," and how the connectivity of people, data, devices, systems, etc., are becoming common place, as well as making the world a much smaller place. He also commented on how he sees a "Pax Urbanica" developing, a world where megacities (and smart-cities) will displace countries as the entities of power, analysis, and the basis for our understanding of social and human dynamics (i.e., life itself). He pointed out how Europe is getting closer to China and how today's connectivity is bringing them much closer together via a new Silk Road. His views were extremely thought provoking, especially when one considers the potential design implications of the connectivity revolution. What innovation could result from smart, connected products, for example, a topic that Dassault Systèmes is addressing with its 3DEXPERIENCE platform and various design focused solutions. The potential appears to be almost limitless, and will undoubtedly drive innovation for many companies.

Mr. Khanna's thought-provoking talk was followed by a set of four topical discussion sessions, each focused on one of the four pillars. First up was Ms. Anne Asensio, Vice President of Design Experience for Dassault Systèmes. Ms. Asensio was asked by the session moderator to discuss why design's value is now considered by many companies as higher than ever before. In her experience, all large companies are shifting and reinventing their innovation models, and placing the consumer at the center. As a design thought leader, she emphasized that Dassault Systèmes believes in imagination, experimentation, and prototyping to enable its customers to engage the world in a meaningful and innovative manner. According to Ms. Asensio, Dassault Systèmes believes that design must be performed in an open and free manner—a manner that fosters the creation of new and innovative ideas, and promotes creativity and innovation on multiple levels. This is worth noting and is fully aligned with CIMdata's experience. In general, CIMdata has found that you can't automate innovation, you must provide the data, tools, and time needed for individuals and groups to think and find new and innovative ways to do things and deliver experiences.

Ms. Asensio's short interview was followed by a discussion on "Designing Experience, from products to unique customer experiences." Ms. Asensio was joined on stage by Mr. Dave Marek, Acura Global Creative Director, Honda; and Mr. John Barratt, President & CEO, Teague. The participants had a lively discussion on multiple design topics. They provided

examples showing why designers must be connected so that they can collaborate and share ideas and designs, both internally and externally (i.e., with partners, suppliers, and customers). Mr. Barratt showed a brief video on their work for Boeing and how it has shifted from physical experiences to digital experiences. He believes they are transforming aviation and that designers must transform as well. Mr. Marek discussed how to keep a performance brand like Acura relevant in a world of autonomous vehicles. Both gentlemen provided examples on how the free flow of ideas, designs, and other customer-centric data is critical in today's rapidly changing economy—something that CIMdata has stressed for years. Without doing so, a company is likely to miss the market opportunity by either getting to market late or delivering a product that isn't accepted by the consumer.

Mr. Tim Houter, Team Captain, Delft Hyperloop, next provided a video update of the competition won by the Delft Hyperloop team. He stressed that the new design paradigm they are using includes "putting yourself in the shoes of your customer." He made his view clear: to be successful they had to design, build, and test a prototype transportation system that had never been done before. He also described how Dassault Systèmes' 3DEXPERIENCE platform streamlined their method of working together as a single team with members distributed across many locations. He claimed that without such a platform they would not have done so well in the Elon Musk-sponsored competition.

Mr. Meron Gribetz, CEO of the augmented reality company Meta then addressed the crowd. He commented on how many designers are limited by their current tools. He stressed how most design tools have based on old user interfaces—interfaces that must be enhanced and updated to address today's and tomorrow's needs. Mr. Gribetz believes that current user interfaces are holding back innovation and allowing automation to overtake man's tasks instead of augmenting them. Automation is replacing millions of jobs around the world. He believes that a growing body of machine intelligence is replacing all type of jobs, from the factory floor to the board room. Mr. Gribetz claims that design tools need to have a "zero" learning curve, because designers and engineers don't have time to be trained and retrained, they must just get it done (i.e., they must design and engineer for a new and rapidly changing world). In Mr. Gribetz's opinion, a two-year-old or a senior citizen should be able to pick up a design tool and use it productively without any training. This would be powerful and needs to be addressed by many of today's PLM solution providers. The resulting opportunities will be significant in CIMdata's assessment.

Mr. Edward Stilson, Design Engineering, Joby Aviation; Ms. Monika Mikac, COO, Rimac Automobili; and Mr. Jon Friedman, CEO & Founder, Freight Farms joined the session moderator to address "Design is the Business Plan: Connected customer experiences become new personalized services." The session participants discussed the rise of new technologies, such as the Internet of Things (IoT) and Cloud, and how they offer new business opportunities for personalized services that leverage data coming directly from consumers and their smart, connected products. Ms. Mikac discussed how Rimac is creating the electric super car of the future, which can be completely customized with regards to how a customer interacts with their own car, as well as how the super car performs. Mr. Stilson spoke about how Joby is designing and building a vertical take-off aircraft that will free-up today's freeways. Joby sees a mobility revolution on the near horizon that will allow people to focus on enjoying where they want to be, instead of being annoyed by the effort it takes to get there. Finally, Mr. Friedman discussed how Freight Farms is rethinking farming by taking climate out of the equation. Within Freight Farms' Leafy Green Machine, for example, everything is controlled including water, light, and nutrients. These are precisely provided based on the specific crops being grown, thereby delivering the optimum yield. Mr. Friedman

commented that Freight Farms is democratizing food production at the local level. These were all excellent examples of how three Dassault Systèmes clients are using their solutions to enable innovative design thinking and realize truly innovative products.

The late afternoon sessions focused on the "Design is Tribes" and "Design is Science Driven" themes. A moderated discussion session kicked off the next session and it included two participants: Ms. Simona Maschi, co-founder & CEO of Copenhagen Institute of Interaction Design; and Mr. John Edson, President of Lunar, a McKinsey & Company partner. Both discussion participants talked about how their companies have connected people, data and ecosystems to create unique experiences. Ms. Maschi's organization stresses putting people, the customer, at the center of design. Prior to the industrial revolution, the customer was at the center, but much of this changed when customer groups become targets, according to Ms. Maschi. She went on to say that the Internet and other technologies have allowed us to connect directly to individuals and craft individual experiences. Mr. Edson described how design processes and methods are changing, how his firm used big data to better understand how people used a specific space within an airport so they could better redesign the area. He also detailed how Dassault Systèmes' solutions are supporting them in this changing environment. To finish out this session, Professor Katsushi Kunimoto, Head of Medical Design Research Centre at the Nagoya City University Hospital, presented how his group uses Dassault Systèmes' 3DEXPERIENCE platform to bring surgeons and designers together to greatly improve the usability of specific surgical devices. These are all excellent examples that illustrate the thought leadership of these select Dassault Systèmes clients.

The last session of the day focused on "Design is Science Driven: Putting science at the heart of design to generate and simulate innovation." This moderated discussion session focused on how science is reshaping design. The session's participants included Mr. John Cerone, Associate Principal, Director, Virtual Design & Construction, SHoP Architects, and Mr. David Wong, Head of Additive Manufacturing Innovation Center at the Nanyang Polytechnic in Singapore. Mr. Wong described how his organization is helping industries understand and embrace additive manufacturing (AM). By understanding how to best design for AM, as well as how associated design technologies, manufacturing equipment, and materials are converging so that companies have the potential to take advantage of this major disruptor. He also emphasized what we can learn from nature (i.e., biomimicry), and how AM can produce designs that mimic nature. Mr. Cerone echoed Mr. Wong's AM comments. SHoP Architects has a 20-year-old start-up mentality and to thrive they must step outside the traditional and restricted world of architecture, engineering, and construction (AEC) tools and methods. In doing so, they have learned to collaborate outside of their domain. Not just being architects, but to think bigger than ever before. For example, they are using AM to create large structures instead of using traditional construction techniques. He concluded by saying that Dassault Systèmes' 3DEXPERIENCE platform has allowed them to work in new and innovative ways. This was the final main session of the event, allowing the audience time to spend in the 3DEXPERIENCE Playground, where they could see and touch displays, products, and Dassault Systèmes solutions that support the four pillars elaborated on throughout the day.

The second day of the event included a strategic trend session and a set of user sessions, again organized around the four pillars. The strategic trend sessions where presented by industry leaders from Nikon, Fiat Chrysler Automobiles, Kengo Kuma & Associates, and New Balance, among others. These individuals focused on one of the four pillars. Each user session was facilitated by Dassault Systèmes leaders, and presented how specific elements of Dassault Systèmes' 3DEXPERIENCE platform are supporting the four pillars. Some of the

topics included "Social Ideation for High Tech Experience," "Designing the Construction Experience," "Boosting Innovation with Simulation," "Realizing the Value of IoT," and "Industrial Adoption of Additive Manufacturing," to name a few of the twenty user sessions held. In addition, the event offered attendees a set of live demos where they could "experience the power of design." The breadth and depth of the event's sessions were impressive. They speak to Dassault Systèmes' capabilities and vision for design in the age of experience.

Concluding Remarks

Dassault Systèmes' DESIGN In the Age of Experience event, held in Milan, Italy during its world famous Design Week, was inspiring and showcased a significant number of their clients and how they are using Dassault Systèmes' 3DEXPERIENCE platform to change the way they innovate and design. This event was organized around Dassault Systèmes' four pillars of design in the age of experience: Designing Experience, Design is The Business Plan, Design is Tribes, and Design is Science Driven, each of which were expanded on throughout the event. This provided a well-thought out and delivered set of messages that brought practical examples on how leading organizations in multiple industries are changing the way they design and supporting their change with Dassault Systèmes' 3DEXPERIENCE platform. Speakers throughout the two days made numerous insightful, and at times, thought provoking comments, one of which was Mr. Gribetz's, that a two-year-old and a senior citizen should be able to pick up a design tool and use it productively without any training. A rather challenging comment, one that will undoubtedly push Dassault Systèmes and the other PLM solution providers even further to democratize the product lifecycle.

About CIMdata

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