Intelligent Digital Mesh Leading the Top 10 Strategic Technology Trends for 2018

Current business landscape is the massive disruption seen in all industries through technology merging the virtual world with the real world. Intelligent Digital Mesh is creating the new set of business models that's changing with the pace of technology advancement. It leads to a future that's determined by connected devices delivering progressively thoughtful digital services worldwide. It's the job of a CTO to respond spontaneously and align with these digital disruptions and make intelligent strategies for your business.

Tech research giant Gartner describes, "The intelligent digital mesh is a foundation for future digital business and its ecosystems. To create competitive advantage, enterprise architecture and technology innovation leaders must evaluate these top trends to identify opportunities that their organizations can exploit."

Intelligent digital mesh involves entwining of people, devices, content and services. It's enabled by digital models, business platforms and a rich, intelligent set of services to support digital business.

David Cearley, vice president and Gartner Fellow in Gartner Research, says, "The continuing digital business evolution exploits new digital models to align the physical and digital worlds for employees, partners, and customers more closely. Technology will be embedded in everything in the digital business of the future".

To stay competitive, it is important for companies to understand how the top strategic technology trends may impact their business model. In a world where increased security threats evolve, the emergence of an intelligent digital mesh brings with it the potential for a sweeping range of successes and disasters.

How Intelligent Digital Mesh is affecting our businesses?

Intelligent digital mesh is the interconnectivity of wearables, mobile devices and IOT sensors that people use to find information or communicate online. The digital mesh refers to the expanded set of endpoints which is used to access applications, gather information or foster human interactions. Intelligent digital mesh is fast becoming a part of today's enterprise due to

- Billions of connected IoT sensors and endpoints that will be deployed by 2020.
- Proliferation of chatbots in the market.
- Improvement in maturity of end-users using wearables.
- Proliferation of virtual assist products like Amazon Echo etc.

GAVS Technologies can help enterprises to achieve the true intelligent digital mesh through its expertise in these three major technological trends

- Artificial Intelligence
- Digital
- Platforms and Architecture

While Artificial Intelligence refers to the Advanced Machine Learning and intelligent Apps, digital refers mainly to the front-end technologies like Virtual Reality and Digital. Platforms and architecture refer to the set of tools which allow us to bring the disparate AI and digital systems together to make an end to end digital mesh capable of delivering proper business value.

GAVS' technical ability is in Advanced Machine Learning and Analytics which form the base for any intelligent digital mesh implementation for your organization.

GAVS' flagship product, GAVel is a predictive analytics AIOps platform that uses intelligent & insightful data aggregation to provide proactive and predictive risk management. Built on Microsoft's Cortana Intelligent Suite and driven by Azure ML, HDInsight & Open source technology, it aggregates information from multiple sources to deliver predictive insights. The predictive algorithms correlates events and hidden patterns within this data to empower IT users and the business to make insightful decisions to manage operations efficiently.

In summary, digital mesh is the next frontier in Technology which if conceptualized and executed in the right fashion will provide great business value to the enterprise and the end user.

Architecture for the digital world

Several new terms are used in business literature including 'digital ecosystems', 'digital platforms', 'platform ecosystems', and 'platform economy' to name a few. Most of these terms refer to ways through which we can increase value by forging relationships between organizations, systems and connected things.

"The mesh" is another term that supports the future of digital business and its underlying technology platforms and IT practices. The mesh focuses on people and the Internet of Things (IoT) endpoints, as well as the information and services that these endpoints access.

Depending on the business or technology context, each of these three words – intelligent, digital and mesh - may have a different subjective meaning. Together, they symbolize a future of seamless connectivity where digital and physical worlds merge and traditional boundaries between organizations, systems and technologies are broken.

New architecture for new enterprise ecosystems

The future of successful digital transformation programs need an architecture that:

- Blends different technologies with varying levels of maturity
- Integrates diverse range of applications, services and devices
- Supports multiple client channels with optimized user experiences
- Enables continuous and agile delivery of new
- features
  Increases performance and scalability for high-volume and real-time interactions

In order to satisfy these requirements, enterprise application architecture is evolving from monolithic to modular and flexible structures. There are new deployment models emerging with higher degrees of agility and scalability. From what is observed, the two major shifts are happening in the areas of:

- Service-oriented architecture (SOA) - SOA is adopting new architecture styles, patterns and protocols such as web oriented architecture, microservices architecture and REST

- Application development - This is transforming to provide:

  - Modern software application architecture and frameworks such as back-end and front-end Java or Java Script frameworks
  - Lightweight infrastructure with cloud-based and containerized workloads
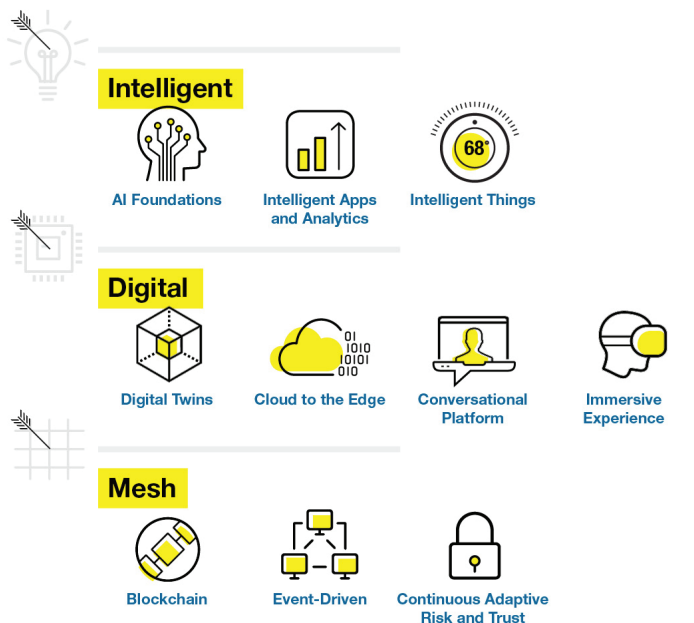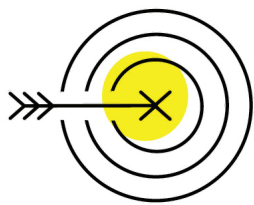 - Automation and agility with DevOps and agile development practices

Gartner mentions the following: "Applications need a different architectural approach to support digital business ecosystems. That approach is mesh app and service architecture (MASA)". Here, some of the key architecture styles are cloud-based, serverless, service-oriented, API-led, and event-driven. Implementing such architecture can be challenging.

So, enterprises must focus on increasing the maturity of services-based computing and exploring new technologies such as containerization of workloads and serverless architecture. Most importantly, they should build new skills in areas of modern software frameworks, hybrid platforms and continuous delivery and integration.

Artificial intelligence, immersive experiences, digital twins, event-thinking and continuous adaptive security create a foundation for the next generation of digital business models and ecosystems.

- Intelligent: How AI is seeping into virtually every technology and with a defined, well-scoped focus can allow more dynamic, flexible and potentially autonomous systems.
- Digital: Blending the virtual and real worlds to create an immersive digitally enhanced and connected environment.
- Mesh: The connections between an expanding set of people, business, devices, content and services to deliver digital outcomes.

Top 10 Strategic Technology Trends for 2018

Intelligent
- AI Foundations
- Intelligent Apps and Analytics
- Intelligent Things

Digital
- Digital Twins
- Cloud to the Edge
- Conversational Platform
- Immersive Experience

Mesh
- Blockchain
- Event-Driven
- Continuous Adaptive Risk and Trust

Source: Gartner.com

Grouped under the Intelligent section of Gartner's strategic technology trends are:

Trend No. 1: AI Foundation

The ability to use AI to enhance decision making, reinvent business models and ecosystems, and remake the customer experience will drive the digital initiatives through 2025. The current AI scenario is Narrow AI, consisting of highly scoped machine-learning solutions that target a specific task (such as understanding language or driving a vehicle in a controlled environment) with algorithms chosen that are optimized for that task.

According to Gartner nearly 59% of the enterprises are in the process of collating information for AI implementation strategies or else have already started in this task.

Trend No. 2: Intelligent Apps and Analytics

Augmented Analytics will enable users to spend more time acting on insights. Virtually every technology will use AI to create intelligent actions or autonomous, self-guiding processes. Many companies will need to incorporate AI into their applications, platforms and services to achieve an edge against the competition.

Trend No. 3: Intelligent Things

Groups of intelligent things will work together. They use AI and machine learning to interact in a more intelligent way with people and surroundings. These intelligent things can exist either with or without AI. These things can operate semi-autonomously or autonomously in an unsupervised environment. Examples include a self-directing vacuum or autonomous farming vehicle. As intelligent things proliferate, we should expect a shift from stand-alone intelligent things to a swarm of collaborative intelligent things like drones.

Grouped under the Digital section of Gartner's strategic technology trends are:

Trend No. 4: Digital Twins

Digital twins will be linked to other digital entities. A digital twin is a digital representation of a real-world entity or system. They are linked to real-world objects and offer information on the state of the counterparts, respond to changes, improve operations and add value.

With an estimated 21 billion connected sensors and endpoints by 2020, digital twins will exist for billions of things in the near future. City planners, digital marketers, healthcare professionals and industrial planners will all benefit from this long-term shift to the integrated digital twin world.

Trend No. 5: Cloud to the Edge

Edge computing brings distributed computing into the cloud. Edge computing describes a situation in which information processing and content collection and delivery are placed closer to the sources of this information. Cloud and edge computing are not competing approaches. When implemented together, cloud is used to create the service-oriented model and edge computing offers a delivery style that allows for executions of disconnected aspects of cloud service.

Trend No. 6: Conversational Platforms

Integration with third-party services will further increase usefulness. Conversational platforms will drive a paradigm shift in which the job of translating intent shifts from user to computer. These systems are capable of simple answers or more complicated queries and will continuously evolve to address even more complex actions, such as collecting oral testimony from crime witnesses and acting on that information by creating a sketch of the suspect's face based on the testimony.

Trend No. 7: Immersive Experience

Augmented Reality (AR), Virtual Reality (VR) and Mixed Reality are changing the way that people perceive and interact with the digital world. Combined with conversational platforms, a fundamental shift in the user experience to an invisible and immersive experience will emerge. Over the next few years the focus will be on mixed reality, where the user interacts with digital and real-world objects while maintaining a presence in the physical world.
Mixed reality exists along a spectrum and includes head-mounted displays (HMD) for AR or VR, as well as smartphone and tablet-based AR.

Grouped under the Mesh section of Gartner's strategic technology trends are:

Trend No. 8: Blockchain

Blockchain offers significant potential long-term benefits despite its challenges. Blockchain is a shared, distributed, decentralized and tokenized ledger that allows untrusted parties to exchange commercial transactions.The technology holds the promise to change industries, and although the conversation often surrounds financial opportunities, blockchain has many potential applications in government, healthcare, content distribution, supply chain and more.

However, many blockchain technologies are immature and unconfirmed, and are largely unregulated.

Trend No. 9: Event-Driven Model

Events will become more important in the intelligent digital mesh. Digital businesses rely on the ability to sense and be ready to exploit new digital business moments. Business events reflect the discovery of notable states or state changes, such as completion of a purchase order. With the advent of AI, the IoT, and other technologies, business events can be detected more quickly and analyzed in greater detail. Enterprises should embrace "event thinking" as part of a digital business strategy.

Trend No. 10: Continuous Adaptive Risk and Trust

Barriers must come down between security and application teams. Digital business creates a complex, evolving security environment. The use of increasingly sophisticated tools increases the threat potential. Continuous adaptive risk and trust assessment or CARTA, allows for real-time, risk and trust-based decision making with adaptive responses to security-enable digital business. Traditional security techniques using ownership and control rather than trust will not work in the digital world.

Digital business has enabled rapid digital innovation and accelerated transformation in all industries. Now the question is, how prepared is your organization to undergo the impact of digital disruption?
GAVS Technologies is your go-to organization for helping you in this digital transformation.

About GAVS

GAVS Technologies (GAVS) is a global IT services & solutions provider enabling digital transformation through automation-led IT infrastructure solutions. Our offerings are powered by Smart Machines, DevOps & Predictive Analytics and aligned to improve user experience by 10X and reduce resource utilization by 40%.

GAVS