~ CONFERENCE AGENDA for SANTA CLARA ~

[subject to change]

Directions 2019
Multiplied Innovation: Scaling a Technology Revolution

7:15 am Registration and Breakfast

7:15 am – 4:00 pm Pavilions

Join analysts, product specialists, and peers to discuss business practices and experience demos that will help you realize future growth potential. Pavilions are open until 4:00 pm for walk-up service and discussions. All attendees are welcome to stop by without appointment.

IDC Custom Solutions Pavilion
IDC Custom Solutions helps clients plan, market and sell in the global marketplace. We create actionable market intelligence and influential content marketing programs that yield measurable results. Stop by the IDC Custom Solutions Pavilion and speak with the experts who can help you PLAN (Custom Analytics, Buyer Behavior), MARKET (Content Marketing, Thought Leadership, Business Value), and SELL (Partnering, Sales Enablement).

IDC Tracker Pavilion
Stop by the IDC Tracker Pavilion where our team of experts can introduce you to IDC's new Tracker products and tools. IDC Trackers provide accurate and timely market size, vendor share, and forecasts for hundreds of technology markets around the globe. Using proprietary tools and research processes, IDC Trackers are updated on a semiannual, quarterly, and monthly basis and are delivered to clients through our online Query Tool.

IDC Artificial Intelligence Research Pavilion
Connect with leading IDC experts at our Artificial Intelligence (AI) Research Pavilion to learn more about our AI thought leadership and expanded research capabilities, which stretch across software, services and infrastructure and provide a comprehensive analysis of the exploding AI opportunity, landscape, drivers and inhibitors. Take time to explore our solutions, including demos of our AI Spending Guide and Tracker products and hear about how they can better inform and support your business goals.

8:00 am – 8:30 am Power Breakfasts

These early-bird breakouts are open to all. Attendees are welcome to pick up breakfast before proceeding to these sessions.

The Evolution of SaaS and the Buyer's Journey, *Eric Newmark, Program Vice President, SaaS, Enterprise Apps, Industry Cloud, and Digital Commerce*
The SaaS market has grown at a rapid pace and shows little sign of slowing. SaaSification of industries and functional markets is on the rise, demand for verticalized SaaS solutions is growing, and the SaaS market's journey toward industry clouds continues to unfold. From a SaaS buyer perspective, expectations continue to heighten surrounding what software vendors should, and ultimately must, provide if they want to survive over the long term. With increased competition and added complexity, it's now more important than ever for SaaS providers to better understand what their customers and prospects really want, how they want to be "sold to," and what their priorities are. This understanding will help SaaS providers properly set their strategic positioning and better craft go-to-market messaging. This session will examine the current SaaS state of the union, discuss changing buyer expectations, and look at where the market is headed.

Enterprise Non-Volatile Memory Express Growth and Use Cases, *Eric Burgener, Research Vice President, Infrastructure Systems, Platforms and Technologies*
Since the first bespoke non-volatile memory express (NVMe)–based system shipped in 2016, many more vendors have tossed their hats into the ring (including most of the majors). In this session, Eric Burgener will review the state of NVMe penetration in the enterprise market today, along with related technologies such as NVMe over Fabric and storage-class memory. Recent primary research in this space that indicates benefits and target workloads will also be reviewed and summarized.

File Services in the Cloud: Buzz or Reality? *Amita Potnis, Research Manager, Infrastructure Systems, Platforms and Technologies*
Enterprises are exploiting the use of public cloud for file services in their digital transformation (DX) journey. Today, file services in the cloud is a nascent market but it bears the promise of enticing enterprises to use public cloud services increasingly for various file-based workloads. IDC expects capacity deployed by public cloud that provides for file services will reach 43EB by 2022. This session will provide insights on file-based workloads migration to the cloud and the key players and partnerships and surrounding ecosystem that includes data management and security services.

Embedded Artificial Intelligence: Reconfigurable Processing Empowers AI in OT Market, *Mario Morales, Program Vice President, Enabling Technologies and Semiconductors*
As AI workload demands and applications are better understood, companies will look to extend AI to non-IT industry segments specifically for inference. Being more agile and responsive to business change and addressing evolving customer requirements have been important in driving the digital transformation in IT and will be critical to the operational technology (OT) market. Speeds, feeds, and brute compute are no longer the winning formula for AI. IDC expects the more fragmented but larger OT market will become a key growth area for technology suppliers over the next decade as systems connect, compute, sense, and become more intelligent, empowering a sea of endpoint devices and data-rich OT systems.

How New Technology Is Accelerating the Benefits of Digital Transformation, *Randy Perry, Vice President, Business Value Strategy Practice, and Matthew Marden, Research Director, Business Value Strategy Practice*
Recently conducted IDC business value research has shown how organizations deploying new technology initiatives — such as artificial intelligence, machine learning, virtual reality, Internet of Things, and big data and analytics — in support of digital transformation have experienced quick realization of business benefits. Randy Perry and Matthew Marden will discuss the financial benefits of these new technologies and what it means for technology providers.

8:45 am – 10:20 am General Sessions

Welcome and Introduction, *Crawford Del Prete, President*

Multiplied Innovation: Scaling a Technology Revolution, *Frank Gens, Senior Vice President and Chief Analyst*
Last year, IDC introduced "multiplied innovation" as the mantra for the next chapter of the IT industry's 3rd Platform era — a chapter powered by the distributed and diversifying cloud, artificial intelligence (AI), app development and distribution platforms, interconnected code and data communities, and an increasingly powerful edge. In 2018, virtually every major vendor reacted swiftly to position themselves for the multiplied innovation marketplace: Microsoft acquired GitHub for $7.5 billion, IBM is proposed to acquire Red Hat for $34 billion, and Amazon and Google continued to aggressively push their cloud and AI technologies to the edge. At the same time, leading enterprises in every industry pursued wholesale reinvention of their digital innovation capabilities to better compete and thrive in a "multiplied innovation world."

At Directions 2019, Frank Gens will look even closer at how multiplied innovation will move from emergent to mainstream over the next five years, sharing IDC's latest research into which technologies, IT management practices, and business models it will take for enterprises (and their IT vendors) to dramatically scale up the pace and volume of digital innovation. He will describe what is no less than a "race to reinvent" — the economy, industries, businesses, IT architectures, innovation tools and methods, user interfaces, trust mechanisms, and the IT industry structure itself — to be ready for the onrushing digitized economy.

Artificial Intelligence: A Slow-Motion Explosion, *Dan Vesset, Group Vice President, Analytics and Information Management*
AI is an opportunity and a risk. AI is pervasive and emerging. AI is promising and challenging. What is clear is that AI is different from other technological innovations. Never in the history of IT have humans tried to infuse autonomous machine decision making into enterprise processes and consumer lives within our ethical, legal, and societal norms. And yet, many enterprises are starting to do just that. They are building natural language digital assistants; incorporating image, video, and audio analytics into applications; and developing intelligent recommendation engines. They are applying a broad range of algorithms across industry and functional use cases to drive efficiency through intelligent automation and to innovate at scale.

In this session, Dan Vesset will present IDC's latest research about spending on AI technology and solutions, challenges faced by customers in adopting AI, and roadblocks faced by vendors developing and marketing AI. He will present IDC's automation evolution framework that will help your organization cut through the hype surrounding AI, assess the likely path of market progress, and develop a road map for investing, developing, deploying, and adopting AI-based solutions.

10:20 am – 10:50 am Networking Break and Pavilions

10:20 am – 10:50 am Analyst One-to-One Meetings

Open to all attendees by appointment. Visit the Analyst Connection Kiosk to schedule your meetings. Visit www.idc.com/directions for a list of analysts available for one-to-one meetings.

10:50 am – 12:00 pm General Sessions

Making the Edge the Ultimate Multiplier for Innovation: Delivering Infrastructure at the Edge, *Richard Villars, Research Vice President, Datacenter and Cloud*
Success in digital transformation requires new thinking about the consumption of IT resources in increasingly "smart" edge locations. These are the urban cores, hospitals, factories, transportation hubs, and a wide range of spaces where local people or "smart" things demand an optimal digital experience. They are where IT, operational technology, and customer experience intersect.

At this service delivery edge, physical compute, storage, and network hardware may be owned/operated by a technology service provider or a supplier, but those assets as well as the applications and data running on them will reside in the customer's datacenters, other customer facilities, or nearby colocation spaces leased by the customer. In this session, Rick Villars will discuss the strategies and challenges that IT organizations and their technology partners must address as they extend new services to edge locations where real-time insight/action, continuous operation despite network degradations, and data privacy/control are paramount.

Digital Transformation Reinvention: The Race to the Future Enterprise, *Meredith Whalen, Chief Research Officer*
Organizations are rethinking digital transformation. After some high-profile failures, innovation being treated as a sideshow, and elusive ROIs, organizations are reshaping their digital visions and their tactics for getting there. With greater clarity about what the future enterprise will look like and what it will take to compete in redefined industries, companies are pivoting away from digital for the sake of innovation to digital for the sake of the business. There is now a laser focus on applying digital technologies to address the future of work, customer engagement, intelligence, operations, and leadership.

Digital presents a multibillion-dollar tech opportunity for suppliers, but a new playbook is required. In this session, Meredith Whalen will share how industries are being reshaped, the digital platform elements you must get right, how to build digital road maps for scale, and what role the future of work plays in all of this.

12:00 pm – 1:30 pm Lunch and Lunchtime Sessions

Pick up a box lunch before your meeting or session.

12:15 pm – 12:45 pm Analyst One-to-One Meetings

Open to all attendees by appointment. Visit the Analyst Connection Kiosk to schedule your meetings. Visit www.idc.com/directions for a list of analysts available for one-to-one meetings.

12:15 pm – 1:20 pm Lunch Roundtables

Open to all attendees on a first-come, first-served basis. Note: Numbered roundtables that are not available in this location have been omitted.

Table 1: 5G and WiFi — Increasing RF Complexity, Capability, and Effects on Systems, *Abhi Dugar, Research Director, Network Infrastructure and IoT Security*
While the IoT-centric wireless and mobile connectivity market is focused on lower data rates, lower power consumption, and lower-cost chips, 5G and WiFi are the key powerhouses of connectivity that continue to push data rates higher and with lower latency, making them a critical part of how devices, networks, and services will evolve. Join Phil Solis to see how RF has taken a more important role and how connectivity will change in the future.

Table 3: The AI Identity: Deep Learning and Biometrics Meet to Transform Digital Payments, *Rivka Gewirtz Little, Research Director, Global Payment Strategies, IDC Financial Insights, and Steven D'Alfonso, Research Director, Compliance, Fraud, and Risk Analytics Strategies, IDC Financial Insights*
As financial services organizations provide real-time payments from every device and on any channel, the last thing they need is a cumbersome authentication experience to crush the customer experience. Now a slew of vendors are pushing the envelope with data-driven identity management services, which combine advanced analytics and biometrics to verify entities and dynamically assess risk. But these vendors are taking differing approaches with relatively new technology and banks will need serious due diligence.

Table 4: AI Processing at the Edge — Optimized AI Processing Architectures and Strategies for Edge Devices, *Michael Palma, Research Director, Enabling Technologies and Semiconductors*
The edge is the next step in the AI revolution. System designers and users are looking to tap into the power of AI in a range of AR/VR, IoT, HMI, autonomous systems, and other applications that will require local AI processing. At the same time, AI processing challenges power consumption and system BOM budgets. Join Michael Palma for a discussion on the emerging AI processing solutions for edge devices. This discussion will review different suppliers, architectures, and ecosystems looking to unlock the value of distributed AI.

Table 5: AI Processing in the Datacenter — Architectures for AI Compute, *Shane Rau, Research Vice President, Computing Semiconductors*
The datacenter leads the search for optimized AI processing. Graphics processors dominate in training and FPGAs in inference, but the search for optimized solutions is bringing in AI ASICs and ASSPs over the next two to three years. Join Shane Rau for a discussion on the outlook for AI processing solutions in the datacenter that will review the different suppliers for training and inference solutions and their architectures and ecosystems.

Table 7: The Business Value of New Technologies in Digital Transformation, *Matthew Marden, Research Director, Business Value Strategy Practice*
Organizations are deploying new technology initiatives — such as artificial intelligence, machine learning, virtual reality, Internet of Things, and big data and analytics — in support of their digital transformation efforts. Learn how organizations are leveraging use of these new technologies to achieve value by improving business results and becoming more efficient operationally.

Table 8: Collaboration, Communities, and Social Media in the Future of Work, *Wayne Kurtzman, Research Director, Social and Collaboration*
Converging social media, collaboration, communities, and messaging introduce the voice of the customer, partner, and employee into new processes, creating new needs, processes, and metrics. When employees and customers are more social savvy than companies, how do you leverage their talents to optimize all social practices, introduce AI and machine learning solutions to drive new efficiencies, measure them, and grow business that demonstrate that "we > me."

Table 11: Container Infrastructure Software — Driving the Next Generation of Compute, *Gary Chen, Research Manager, Software Defined Compute*
Containers have been immensely hyped as the next compute primitive for next-generation applications, but they're also being used to encapsulate existing legacy applications. Learn how enterprises are adopting containers and how they're using them. We'll also discuss the impacts on server virtualization and private/public/hybrid cloud.

Table 14: Datacenter Networking for Multicloud, *Brad Casemore, Research Vice President, Datacenter Networks*
As hybrid IT and multicloud strategies become the norm, what does it mean for the evolution and extension of the on-premises datacenter network? In this discussion, we'll explore how cloud is driving the need for increasingly intelligent and automated datacenter networks that simplify the definition and enforcement of consistent network and security policy across multicloud environments.

Table 18: Emerging Trends That Are Accelerating Developer Productivity, *Larry Carvalho, Research Director, Platform as a Service*
Platform as a service (PaaS) primarily focuses on giving developers the tools to accelerate application development and delivery. As technology is maturing, developers are choosing multiple options to handle the demand for applications including containers, serverless computing, and even do-it-yourself PaaS made up of CI/CD tools. IDC has conducted multiple surveys, and we will bring this information as well as subject matter expertise to answer your questions about the trends of PaaS adoption.

Table 20: Enabling Autonomous Driving — The Sensor Systems, AI, and the Evolving Automobile Architecture, *Nina Turner, Research Manager, Worldwide Semiconductor Applications Forecaster*
Advanced driver assistance systems and autonomous vehicle development is transforming the automobile industry in fundamental ways. Join Nina Turner for a discussion on the sensor systems necessary for different levels of autonomy (from Level 2 to Level 5), the use of artificial intelligence and the processing power and memory necessary to support autonomous vehicles, and how the automobile architecture is evolving to enable autonomous driving. This discussion will also explore the autonomous vehicle vendor ecosystem and how different suppliers are working to address these challenges.

Table 21: File Services in the Cloud — Exploring the New Age, *Amita Potnis, Research Manager, Infrastructure Systems, Platforms and Technologies*
As file services in the cloud become more prevalent offerings across public cloud providers as well as traditional vendors, the question remains which workloads predominantly will move to the cloud and what happens on file services on-premises. During this roundtable, in addition to discussing file workloads moving to the cloud, we will discuss specific factors that play an important factor in this movement such as price point, regional availability, feature/functionality, high availability, and performance.

Table 22: Intent-Based Networking and Evolution of the Enterprise Campus, *Brandon Butler, Senior Research Analyst, Enterprise Networks*
Intent-based networking (IBN) has gained prominence as a next-generation network management platform for enterprise campus networks. Self-driving or intent-based networks use advanced levels of automation, visibility, and assurance tools, combined with machine learning technology to reduce complexity and improve efficiency. We will discuss how IBN has been developed, its business benefits, and the future of this important technology.

Table 23: Keeping Your Hardware Secure, *Kuba Stolarski, Research Director, Infrastructure Systems, Platforms and Technologies*
After decades of security battles based in software, last year, we learned that most processors can expose sensitive data through side-channel vulnerabilities and that it is possible to infiltrate a supply chain to alter hardware in order to enable a future security breach. Hardware appears to be a new front in cybersecurity, but it's not actually a new attack surface. This discussion will focus on what you need to know about hardware security.

Table 24: Latin American ITC Markets — Where Are the Opportunities? *Jay Gumbiner, Research Vice President, IDC Latin America*
Come hear about the latest trends impacting the Latin American ITC markets and get answers to questions such as: Which countries are growing well? How will the recent presidential elections impact these countries? Is cloud adoption slower or faster in Latin America? Which countries should my company be investing in? Are there any "unicorns" present in the region? Bring your questions and we'll have a great discussion together!

Table 25: Marketing Science, Attribution, and ROI: Opportunities and Challenges, *Kathleen Schaub, Program Vice President, CMO Advisory and Customer Experience*
What is marketing science? Evidence-based decisions, a culture of testing and adapting to new insights, and strong use of data, analytics, and other quantitative information. But marketing cannot live by science alone. We'll discuss how to build a thriving science-oriented marketing function, make progress on attribution and ROI capabilities, and inform the art and psychology of marketing.

Table 29: A New Era in the Operating Systems Market, *Stephen Belanger, Senior Research Analyst, Infrastructure Systems, Platforms and Technologies*
The emergence of newer applications, technologies, and use cases will set the macro direction for the worldwide operating systems in the future, and the future is arriving now. That future is the world of next-generation applications, containers, microservices, thin operating systems, and other emerging areas. Join Stephen Belanger for a discussion on the future of the operating systems market.

Table 30: Next-Generation Automotive Services — Defining and Redefining the Future Vehicle Ecosystem, *Matt Arcaro, Research Manager, Next Generation Automotive*
Investments in software, services, and platforms are continuing to change the game in automotive. From the development of autonomous vehicles to new monetization approaches in mobility as a service (MaaS), the ecosystem will continue to encounter new entrants and potential disruptors. Join Matt Arcaro for a discussion focused on how traditional and nontraditional suppliers, providers, and manufacturers are investing and evolving to capture growth in this highly competitive area.

Table 31: NVMe Deployment Drivers in the Enterprise, *Eric Burgener, Research Vice President, Infrastructure Systems, Platforms and Technologies*
In 2H18, IDC completed several primary research projects and other research around the general topic of NVMe. We have a lot of quantitative data that can help our clients understand exactly why those customers who have deployed NVMe in production are doing so, and we will discuss those at this roundtable.

Table 32: Operationalizing Digital Transformation — Understanding and Engaging the Functional Areas of a Business, *Shawn Fitzgerald, Research Director, Digital Transformation Strategies*
IDC's Shawn Fitzgerald will present and discuss how leading organizations are fundamentally rethinking the 8 functional areas of customer experience, finance, human resources, legal, procurement, research and development, facilities, and information management through DX, based on IDC's survey and findings from over 1,500 North American companies. Join the dialogue on the state of maturity for creating customer value and your opportunities to monetize these transformations.

Table 33: Partner Business Model Transformation, *Pam Miller, Director, Infrastructure Channels Research*
Channel partners are becoming 3rd Platform and cloud experts to satisfy customers demand for digital transformation initiatives that advance their strategic objectives. To do this, partners are deploying new consumption-based business models. This changes partner economics/profitability, what activities partners perform, and where they are investing. It also changes how vendors and distributors can help partners.

Table 34: Performance Marketing Insights: Best Practices for Analyzing Content Marketing Success, *Jason Cunliffe, Vice President, Content Marketing and Sales Enablement Services*
In today's complex digital marketing landscape, measurement of your IDC content marketing investment must be part of any successful initiative. Join this engaging discussion to learn how IDC's Performance Marketing Insights (PMI) service helps you move to a performance-oriented mindset and develop realistic objectives and meaningful metrics through development of a PMI content success framework. Explore how your paid, earned, and owned strategies drive to awareness, consideration, and purchase objectives with your IDC content, ultimately leading us to provide suggestions to help further amplify and/or enhance the key IDC components of your content marketing campaigns.

Table 37: Smarter Datacenter Facilities: Understanding the Power of the Ecosystem, *Jennifer Cooke, Research Director, Cloud to Edge Datacenter Trends*
Smarter datacenters are the foundation supporting resilient and agile IT service from core to edge locations. Many organizations are exploring ways to leverage machine learning and autonomous operations to improve performance. Join Jennifer Cooke for a discussion of the challenges customers face along this journey and the power of the smarter datacenter ecosystem.

Table 38: Strategies for Database Migration to the Cloud, *Carl Olofson, Research Vice President, Data Management Software*
Most enterprises have begun planning migration of at least a portion of their database workloads to the cloud. Some plans include transforming current on-prem workloads to be cloud optimized. In other cases, the on-prem and cloud forms co-operate, with communications set up in between (the hybrid cloud model). In still other cases, enterprises are rewriting their applications to use cloud-native DBMSs different from those currently in use. Join in, and share how your organization is planning its database cloud migration.

Table 40: What's Next for Blockchain — Building the Business Cases, *James Wester, Research Director, Worldwide Blockchain Strategies*
Now that blockchain is beginning to see some adoption and success through pilot programs and proofs of concept, will the technology successfully scale to meet the needs of enterprises looking to use it? Will it compete with existing technologies? Join a lively debate around blockchain and distributed ledger technology, and discuss how these technologies move forward from theory to reality.

12:35 pm – 1:15 pm Lunch and Learns

Pick up a box lunch before your session.

Digital Commerce 2024: A Glimpse at the Future of Transactions, *Jordan Jewell, Senior Research Analyst, Digital Commerce and Enterprise Applications*
In just five years, the ways in which people buy and sell products and services will be drastically different. Digital commerce, the sale and procurement of products and services digitally, is disrupting every industry and challenging each organization to rethink their commerce strategy. More advanced technology platforms, the collapsing of supply chains, and digital marketplaces will prompt more personalized and friction-less commerce experiences. Innovations such as IoT, AI, and autonomous are increasingly influencing buying and order fulfillment processes in both B2B and B2C. This session provides insights into the future of commerce and how your organization can come out on top in the coming years.

A New Era in Software Support: Improving the Customer Experience in a SaaS World, *Elaina Stergiades, Research Manager, Software and Hardware Support Services*
With the rise of as-a-service solutions across IT, many providers are switching from offering "support" to promising concrete results like "customer success." But new labels and repackaged offerings are not enough. Across the technology provider landscape, the underlying capabilities and technologies must change significantly to help customers achieve true success. With software support moving away from reactive break/fix to more preventive and predictive support, many providers are adding capabilities that were not traditionally part of support. In addition, the nature of SaaS and changing customer requirements is forcing software providers to step up their game in support delivery and ensuring end-user satisfaction. In this session, Elaina Stergiades will explore how customers define success in an as-a-service world and the primary support requirements that will help achieve their objectives. She will also examine best practices to improve the post-implementation experience through support, resulting in true customer success.

The Future of Work: Preparing for the New Normal, *Holly Muscolino, Research Vice President, Content and Process Strategies and the Future of Work*
Technology is rapidly changing work as we know it. Work is no longer bound by a physical place or specific time of day. Organizations must adapt to a multigenerational labor force and one that is more and more task oriented, target focused, and gig based. And that workforce will increasingly consist of humans and machines collaborating to transform how work gets done. This session will present a framework for approaching the future of work. We will also present recent research that provides a snapshot of where enterprises are today, as well as an IDC MaturityScape for the future of work, that provides a blueprint for evaluating your own company and determining the steps that you need to take to get ready for the "new normal."

New Metrics and KPIs for the Digitally Transformed IT Organization, *Suya Xiong, Research Manager, IT Executive Programs*
IDC research has found that digital transformation requires tremendous changes in IT measurement. Thriving organizations are embracing a new regimen of metrics and key performance indicators (KPIs) to refocus their teams and motivate new digital behaviors. Digital transformation challenges enterprise IT organizations to accelerate implementation of new technologies, pivot to new hosting options such as public and private cloud, and increase IT's clock speed to keep pace with the business. New metrics enable IT to address these challenges and meet the demands of an expanding to-do list. In this session, Suya Xiong will share the results from the latest IDC MeasureScape survey and give insights on metrics and KPIs for digitally transforming IT organizations working on critical areas such as infrastructure modernization, cloud adoption, application rationalization, and security.

12:50 pm – 1:20 pm Analyst One-to-One Meetings

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1:30 pm – 2:10 pm Track Sessions

Track 1: The Promise of Intelligent Infrastructure: When AI Meets People and Process, *Matt Eastwood, Senior Vice President, Enterprise, Datacenter, Cloud Infrastructure, and Developers*
Our industry focuses a great deal of attention on technology and its business benefits. In our digitally transformed world, everything is connected to everything else and this creates new datastreams that need to be stored and computed. Organizations are making the largest investments and changes in datacenter infrastructure in decades, and this is placing enormous pressure on IT staff and organizational processes. In this session, Matt Eastwood will explore how datacenter design and operations will be redefined by new forms of intelligent infrastructure aimed at accelerating organizational agility and business innovation. New IT consumption models and innovation strategies will be explored.

Track 2: Enhancing the Digital Experience: It All Starts with the Data, *Curt Savoie, Program Director, Global Smart Cities*
Artificial intelligence, analytics, machine learning ... it's all powered by data. In this world of exponentially growing digital experience touch points, data is being generated that is faster, bigger, and more complex than ever. As the intelligence moves to the edge and AI-enabled experiences become the norm for interfaces, we will have to be prepared with a solid understanding of what's possible now and in the future. We especially need to properly consider the ethical and potentially societal changing ramifications of future AI development. How do we create the right levels of oversight that can protect us but also not stifle critical innovation? How do we properly consider data in its raw form and build solutions that protect customer values throughout the stack? And finally, what roles do governments, suppliers, researchers, and the public play by working together? Only by understanding the ethical, epistemological, personal, and legal aspects of the data can we hope to empower a future of trusted AI.

Track 3: The (Security ≠ Trust) Equation, *Jay Bretzmann, Program Director, Security Products*
Is a security failure an indictment on trustworthiness? Should it be? This session will focus on how trust is conceived in a digital reality and what interrelation exists between security and trust — whether security is an appropriate measuring stick in determining the trustworthiness of an organization and, if it is, to what degree it should be a factor. In addition, the session will examine how this complicated dynamic is affecting the security industry and its many offerings. Will only the most trusted industry stalwarts be positioned to compete?

Track 4: New Developer Personas and the Changing Face of User Experience, *Arnal Dayaratna, Research Director, Software Development*
The industry is at a major inflection point. If every company is to become a software company, how does the industry reshape itself, staff up with developer talent, and compete in this new world? Meanwhile, the traditional world of application development is experiencing pressures from every direction. Developers are being asked to work faster, embrace new programming techniques, consume a wide variety of new services, and deliver a heavily modernized user experience — while still maintaining existing applications. How does that happen, and where will the development talent come from to accomplish these lofty objectives over the next five years? Join Arnal Dayaratna as he takes you through a presentation that considers the changing goals and objectives being placed on developers; the types of development they are being pushed to do; what new languages, technologies, and development techniques are being used; and how IT departments are changing as a result of this software development crisis.

Track 5: The Velocity of Change Drives a New Generation of SaaS, *Frank Della Rosa, Research Director, SaaS and Cloud*
Representing more than 50% of the overall cloud market, software as a service is the largest and most mature segment of cloud computing. The magnitude and rapid pace of change instigated by digital transformation and innovation accelerators like machine learning and Internet of Things have a profound impact on IT buyers' priorities, and what organizations expect from their technology suppliers. In response, a new generation of SaaS applications is emerging. These applications are designed to take full advantage of innovation accelerators and harness the full potential of cloud in all its forms. While next-generation SaaS applications offer significant upside for organizations, there are many new layers of complexity now involved in the buying decision. More than ever before, it's critical that the correct cross-functional stakeholders be involved in the IT purchasing decision to ensure that all departmental needs are properly balanced against the transformation mandates of the business. The impact delivered by this new generation of SaaS applications will be explored and unpacked in this session.

Track 6: How the Long Tail of Managed Service Providers Is Enabling IT Transformation, *Rory Duncan, Research Vice President, Cloud Service Providers*
The rise of multicloud models both on-premises and off-premises, expanding IT portfolios and the increasing adoption of other disruptive technologies means that customers require significant hand-holding as they transform their IT environment. Based on thousands of interviews with customers and cloud service providers, this session looks at the abundance of new managed services customers are buying, the transformation of the service provider business, key partnerships, and how everyone will make money.

Track 7: The Customer Experience Landscape: Ecosystem Opportunities, *Alan Webber, Research Director, Digital Strategy and Customer Experience*
We are living in the new age of the technology-driven experience economy, where what differentiates one company from another in the eyes of the customer is the experience they provide. What has been the genesis for this new age? Computing power, AI, data, analytics, user interfaces, and other technologies are changing how companies can interact and engage with customers while customers using similarly capable consumer technologies are becoming habituated to better and more engaged experiences. The result is an endless cycle of technology adoption that continues to drive the experience forward and is becoming the primary point of competitiveness between brands. How should brands and technology companies view this new world? By understanding that the cornerstone of an experience is the technology employed on both the company side and the consumer side. Come learn about how new and emerging technologies are building out this foundation of experience and transforming the experience landscape, and what you need to be thinking about tomorrow to provide that differentiated experience to your customers.

Track 8: Transforming Asset Management at the Edge, *Reid Paquin, Research Director, IT Priorities and Strategies, IDC Manufacturing Insights*
Manufacturing and energy companies are moving asset management to the edge. This move is sparking the discussion and examination of transformational use cases such as asset instrumentation, asset health, and asset self-diagnosis. In this session, attendees will learn how edge capabilities will drive improved asset performance and transform how operations works with IT.

2:20 pm – 3:00 pm Track Sessions

Track 1: Autonomous Infrastructure and the Evolution of the Self-Driving Network, *Rohit Mehra, Vice President, Network Infrastructure*
Network transformation is well on its way with the evolution of SDN and SD-WAN, leading to flexible network architectures taking hold from the cloud to the enterprise edge, powered by intelligent automation. Increasing use of streaming analytics and pervasive visibility, enhanced by ML and AI, is creating a next-generation, agile network that self-remediates performance issues and proactively responds to security threats. The result will be greater operational efficiencies, improved user experience, and verified SLAs that ensure delivery of meaningful business outcomes.

Track 2: Artificial Intelligence: Redefining the Systems Integration Landscape, *Ali Zaidi, Research Director, IT Consulting, Systems Integration, and Artificial Intelligence Services*
The systems integrator landscape will be transformed by AI-based automation in services delivery. The evolution of automation in the build segment of the assess, plan, design, and build cycles of professional services completely changes the composition of the modern systems delivery organization. Enterprise needs and new demands for automating the build part of services delivery drive the advent of AI-enabled augmentations in delivery processes, tools, frameworks, and methodologies. This will have a significant effect on the type of skills the providers and the customers will need to develop/attain both currently and in the future. Services vendors and enterprises are utilizing a variety of strategies and emerging best practices to develop/reskill talent in the age of rapid services automation.

Track 3: The Perils of Disclosure Indecision, *Ryan O'Leary, Senior Research Analyst, Legal, Risk, and Compliance*
In an era of increased privacy and cybersecurity regulation, enterprise behaviors, post breach, are under greater scrutiny. Numerous new and more onerous breach notification requirements are a direct reflection of the increased scrutiny, and enterprises face potentially irreparable damage to their goodwill and brand for failing to meet requirements or by exposing incomplete or inaccurate information. This session will focus on what breach notification requirements really mean to the organization, the processes and best practices that organizations use to avoid unnecessary pitfalls, and the enterprise risk culture and the ethics and risk of "trying to do the right thing."

Track 4: The Digital Backbone: Intelligent Process Automation Enabling Multiplied Innovation, *Maureen Fleming, Program Vice President, Intelligent Process Automation*
With application development, most people think about developers and programming. But enterprises collectively spend $25 billion annually on software to help them build, deploy, and integrate applications. And most of this software has changed substantially over the past few years. Even as the core tools used to build solutions have changed, initiatives associated with digital transformation are forcing architects and development teams to think about additional value-add by layering in other types of software that collectively multiply the impact of innovation by driving down operating costs while improving customer experiences. Business, development, and data scientist teams are working together to make applications more portable, able to interoperate within a larger ecosystem, become predictive and more dynamic, and run faster and with significantly greater levels automation. Join Maureen Fleming as she connects the dots between the developer's classic world of application platforms, integration, and workflow to the unfolding and high-growth world of connected systems that include robotic process automation, API management, AI, streaming, and functions to deliver intelligent process automation, effectively creating an enterprise's digital backbone.

Track 5: The Rationalization, Modernization, and Transformation of Enterprise Applications, *Mickey North Rizza, Program Vice President, Enterprise Applications and Digital Commerce*
Building the enterprise of the future is a complex endeavor. DX is changing the way the business works, as organizations must not only set their trajectory with digital transformation but also understand how their enterprise applications will change in design, scope, workflows, and data usage. Join IDC's Mickey North Rizza as she focuses on the enterprise application changes enabling technology to become a stronger and more-relied-upon resource for the entire enterprise. KPIs and better business outcomes will be discussed as new and improved business processes are introduced.

Track 6: **Asset Procurement: Why Flexible Consumption Models Are Disrupting Buying Behaviors,** *Rob Brothers, Program Vice President, Software and Hardware Support and Deployment Services, and Sue Middleton, Research Director, Technology Financing Strategies*
For companies to successfully digitally transform, they must undertake an IT transformation (ITX), this may entail upgrading their essential datacenter infrastructure. This presents an economic opportunity for both vendors and partners to help customers achieve this goal. Customers want the best cloud-based technologies, and they want to pay for it in flexible and predictable payment terms, not unlike a traditional public cloud solution. In this session, Sue Middleton and Rob Brothers will discuss the latest flexible consumption models from OEMs, market models that forecast customer adoption trends, and anticipated new announcements as we approach flexible consumption 2.0.

Track 7: Marketing Success Depends on an Integrated Customer Experience, *Kathleen Schaub, Program Vice President, CMO Advisory and Customer Experience*
According to IDC's *IT Buyer Experience Survey,* 93% of technology buyers say that customer experience (CX) will have greater influence over their future purchase decisions — with 63% saying it will be a significant factor. Both new customer acquisition and customer loyalty increasingly depend on a company's ability to offer a quality CX. To increase revenue, companies must get out of their own way. Frictionless experiences depend on cross-functional integration — from customer touch points through the organization structure to the supporting technology and data infrastructure. IDC will share insights into the future of the CX-ready company. Customer experience is a mindset, not a department. It goes beyond linking functional silos to developing innovative processes, roles, and structures, none of which can be successful without technology. Which executives will have the most significant roles in this future? What collaborative, technology-infused, business functions are becoming the new "must-haves"? What will be the impact of innovation accelerators such as artificial intelligence on the integrated organization? Answers to these questions and more will be explored.

Track 8: The Industrial IoT Platform as the Core for OT and IT Convergence, *Stacy Crook, Research Director, Internet of Things*
Industrial IoT (IIoT) deployment continues to accelerate. Manufacturing and energy companies must develop the capability to manage the myriad of OT systems and devices as part of a broader strategy. A key part of that strategy is an IIoT platform and its ability to orchestrate the OT world of devices and systems. This session will present IDC's view on how companies can embrace and deploy an IIoT platform as part of a broader IT/OT governance model.

3:10 pm – 3:50 pm Track Sessions

Track 1: The Opportunity for Autonomy in a Cloud Infrastructure-as-a-Service-Centric IT Environment, *Deepak Mohan, Research Director, Infrastructure Systems, Platforms and Technologies*
The pace of innovation in the cloud infrastructure landscape shows no signs of peaking; providers continue to update portfolios and introduce new services. Overlaid on this fast-changing offering landscape are emerging patterns of cloud adoption — such as multicloud environments and hybrid cloud environments. While this richness creates choices and optimization opportunities, these also introduce new complexities — like securing an ever-expanding boundary, taking advantage of granular scalability, and detecting island resources. One approach to addressing this complexity is through advanced automation — leveraging machine learning and autonomous decision-making frameworks. This session will discuss the expanding areas where autonomous operations are being applied in an infrastructure-as-a-service-centric IT environment and the ways in which autonomous frameworks can increase agility and trust in a cloud infrastructure-centric enterprise IT world.

Track 2: AI Infrastructure: Horsepower Changes Everything, *Peter Rutten, Research Manager, Infrastructure Systems, Platforms and Technologies*
The days of the omnipresent homogeneous, general-purpose server are over. The speed with which training and inferencing for ML and DL can be executed is of critical importance for organizations that are developing and deploying AI applications. The growing adoption of AI has led to an eruption of different infrastructure technologies aimed at increasing performance and reducing latency of the AI data flows. Increasingly, parallelization is the preferred approach, with AI infrastructure starting to resemble HPC infrastructure. Existing as well as start-up technology companies are developing new technologies such as processors, co-processors, interconnects, and orchestration layers aimed at AI workloads. Server vendors are incorporating these technologies in various ways and expanding their products up the stack and beyond. Meanwhile, providers are competing with new AI-focused instances. This session will provide an overview of the current AI infrastructure landscape, where it is heading, and how to navigate the myriad options.

Track 3: Rethinking Managed Security in the Digital Age, *Curtis Price, Program Vice President, Infrastructure Services*
In the new digital world, how we look at securing our transforming environment is in transition. The legacy question, "Are we secure?" will shift to "How secure are we?" Metrics and visibility become key. All digital activity and applied controls must be measured, including the legitimate events — not just suspicious traffic. It is not uncommon to assert that policies and procedures are more important than inline controls or to suggest that one should eliminate technical information when discussing cybersecurity with executives. But, there is no escaping that 100% of the risk in question comes from digital activity. How do organizations manage these requirements without the help of a trusted security partner? It might not be possible.

Track 4: DevOps: How Automation and Intelligence Drive Velocity, *Jim Mercer, Research Director, DevOps*
DevOps and agile development have become buzzwords for an industry obsessed with successfully navigating through a digital transformation and accelerating the overall process of creating new software. But moving to a software-driven world is about a lot more than just streamlining development, operations, or implanting a process that bridges dev and ops. This is about a fundamental shift affecting the mindset of a company from an operational point of view. This session will introduce the steps that organizations can take to move methodically toward an agile development, deployment and operational paradigm, and the pitfalls that need to be avoided. Strategies for how organizations can successfully free developers from legacy/waterfall development processes, and how to recruit executive sponsorship will be covered, along with the opportunities for vendors to provide assistance to organizations making this transition. As a longtime developer, Jim Mercer can provide firsthand experience about what works and what does not work, along with guidance to ensure that DevOps investments result in innovation acceleration.

Track 5: Monetization as a Service: Monetizing at the Speed of Cloud, *Mark Thomason, Research Director, Digital Business Models and Monetization*
By 2022, IDC estimates that over 50% of software revenue will come from the subscription/consumption business model, with most of this revenue coming from SaaS applications. However, many companies still have multiple older monetization systems in place that cannot easily support new business models, and pricing is being managed manually. Homegrown/spreadsheet solutions that manage monetization functions like usage, pricing, and RevRec are also relied on, which further constricts innovation and scale. Today's SaaS-based monetization systems include the latest technology (ML and AI) and easily integrate with your existing systems to provide what is essentially becoming monetization as a service. Companies are also exploring ways to use the SaaS model, combined with their anonymized customer data, to drive new opportunities around marketing and data as a service. This session will take you through several business model scenarios and discuss the benefits and best practices of key functions in monetization as a service.

Track 6: Reducing Cloud Complexity with Multicloud Management, DevOps, and Automation, *Stephen Elliot, Program Vice President, Management Software and DevOps*
Enterprise IT organizations have adopted multiple clouds to drive their business strategies. IT executives are increasingly deciding how to balance investments between heritage and modern cloud deployment models. This session will provide market context and enterprise best practices on reducing public and private cloud complexity using technologies and processes that enable multicloud management, DevOps practices, and automation.

Track 7: How Experiential Retail Inspires Customer Experience Innovation, *Leslie Hand, Vice President, IDC Retail Insights*
Digitally transforming and innovating for the consumer are table stakes in retail. IDC's research confirms that most retailers no longer question if customers shop differently and that retailers clearly recognize the importance of delivering a seamless omni-channel experience through any channel, but retail leaders stand apart by embracing disruption and multiplying innovation. Experiential retailers that innovate consumer experience continuously, never settle for "good enough," and instead strive for "best" experiences provide inspiration for how all industries may improve CX. Experiential retailers are creating connected future store and omni-channel experiences that leverage a myriad of technologies. Using examples from retail initiatives, we will highlight how this year's disruptive technologies ultimately become tomorrow's fabric of experiential retail. Technologies discussed will include cloud, the data core, the edge, automated checkout, the digital shelf, voice-enabled assistants, natural language processing, marketplaces, hyper-personalized and/or contextualized engagement, payments, augmented reality (AR), virtual reality (VR), robotics, IoT, mobile, and the fundamental underpinnings of retail innovation. Join this session to hear about how retailers are multiplying innovation, disrupting their own businesses, and inspiring CX innovation everywhere.

Track 8: Data at the Crossroads of IT and Operational Technology, *Kevin Prouty, Group Vice President, IDC Energy and Manufacturing Insights*
Data governance and the integration of the IT and OT data strategies is an old story with a new ending. This session will examine OT systems such as data historians and HMI and how IT works with OT to transform those systems into value centers for the entire enterprise. A point of emphasis will be how companies manage the data governance between IT and OT. Kevin Prouty will provide detailed insight and analysis and review findings from recent IDC research on the transforming governance model for IT and OT.

4:00 pm – 5:00 pm Featured Keynote

Disruptive Thinking: How to Spark Transformation in Your Business,
Luke Williams, NYU Stern School of Business and Best-Selling Author
Successful companies operating in mature industries that embrace incremental change find themselves on a path that continues to narrow. Eventually, they reach the end of the path, and by then, their customers have forsaken them for a new offering that nobody saw coming. Still, companies that try to differentiate themselves by focusing on incremental innovation instead of game-changing, disruptive innovation will often differentiate themselves right out of business. When companies do take disruptive risks, it's often because they are backed into a corner and there is no other choice.

These companies can't afford to wait until they are backed into a corner. In this thought-provoking session, Luke Williams delivers his unique perspective and guidance on business transformation and how companies must consistently make bold, proactive moves — even at the very peak of their success — to ensure their market leadership. It is an essential skill for anyone in business — from a small start-up to a global corporation — with the desire to transform organizational processes and behaviors and ask, "Why hadn't we ever thought about our business and industry this way before?"