The Consumer-Driven Digital Economy Creating Value

in a digital world where the consumer is in charge

Run Simple

A MESSAGE FROM E.J.



Engaging consumers and capitalizing on new opportunities depends on the capacity to identify, act on, and deliver value in a moment, exactly where and when a need arises.

Miss the moment, miss the opportunity.

E.J. Kenney SVP, Global Head of Consumer Products SAP Dear Customers and Partners,

In the age of the digital consumer, we can no longer refer to the "consumer products" industry – it is now the "consumer outcomes" industry.

By 2020, the world's population will grow to 7.7 billion people,¹ and everyone on earth will have one thing in common – they will all be digital consumers.²

Billions of new consumers are joining the global middle class, bringing trillions in net new spending power. Demand for water, natural resources, and key food categories may outstrip supply. Consumers are living longer, healthier, and differently. They are increasingly urban, hyper-local, and "always on," connected to one another and to the world around them in real time.

Despite decades of process improvement investments for efficiency and scale, complexity and cost continue to grow. "Personalization," such as SKU proliferation, shorter product life cycles, and more channels, only challenges service delivery, increases inventory, and drives cost.

Couple these considerations with 30 years of downward trending median industry profitability,³ declining brand loyalty and market share among the industry's top 100 brands,⁴ and projections that the industry, in its current form, is unlikely to grow beyond population growth rates, and it becomes clear that there is an economic imperative to act now.

In the new digital economy, competition, consumer engagement, and operational effectiveness are fundamentally changing, and accelerating. New competitors are redefining the landscape at unprecedented rates. Building and keeping trust mean delivering exceptional brand experiences, every time, via agile processes that balance consumer needs with cost to serve. One size does not fit all.

Engaging consumers and capitalizing on new opportunities depend on the capacity to identify, act on, and deliver high-value experiences and outcomes like joy, confidence, security, and control, all in the span of a moment, exactly where and when a consumer or business need arises. Miss the moment, miss the opportunity.

In this environment, profitable growth will not result from doing things incrementally better, but from doing things fundamentally differently by shifting from products to outcomes. How?

- Reimagine business models Integrate vertically and virtually to compete as an ecosystem, transform products into services, and capitalize on knowledge
- **Reimagine business processes** Engage consumers with real-time personalization, enable hyperlocal demand and supply networks, and optimize capacity with hyperconnected manufacturing
- Reimagine work Fundamentally transform productivity, exponentially improve enterprise intelligence, and empower a flexible, agile workforce to enable agility at speed

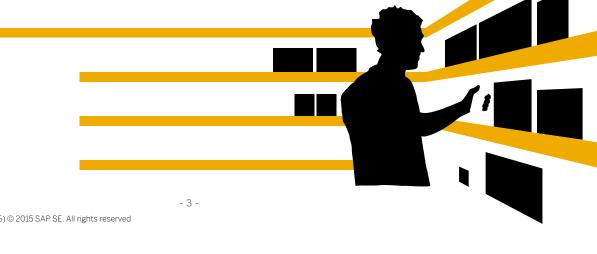
The time to unleash the power of digitization is now, both to maintain a healthy business and to drive new growth, and to balance current infrastructure and future innovation without disruption.

Here we offer our perspective on the future of the industry and how SAP contributes to the transformation of the consumer-driven digital enterprise. Thank you for your interest, and I look forward to our journey together.

E.J. Kenney SVP, Global Head of Consumer Products SAP

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EXECUTIVE SUMMARY _

Big picture: Digital transformation is the catalyst for growth

The consumer-driven digital economy

The "consumer products" industry has become the "consumer outcomes" industry. When consumers can get what they want, when and where they want, differentiation no longer results only from quality, price, value, or convenience, but from subjective, nuanced, and intangible outcomes and experiences like joy, confidence, control, and protection.

Today's challenge: Move from carts to hearts

Consumers expect a new type of experience – one that makes their lives easier, is personal, relevant and simple, where commerce is seamless, technology is invisible, and privacy, security, and trust are assumed and assured. They don't want to be sold to or influenced. They want to be inspired, guided, educated, and helped.

A world without SKUs

Experiences and outcomes can't be forecasted, manufactured, stocked, or distributed. They are created and delivered in moments of need. New digital leaders are already transforming products into services, creating new value by competing as ecosystems and by delivering outcomes – joy, comfort, beauty, control, security, confidence – that cannot be barcoded.

A world without boundaries

Timely, tailored, and relevant experiences are orchestrated by networks of dynamic, collaborative business functions, processes, and partners. When evaluating experience, consumers don't distinguish between you and a retailer, trade promotion, or marketing offer, or even between you and a another new competitor you never even saw coming.

Anything less than real time is out of time

Value chains have defined the industry, but, in the digital economy, chains are the ties that bind. They are sequential, time-lagged, and inflexible. Only real-time, dynamic, agile, and collaborative networks will deliver the experiences and outcomes consumers now demand.

WHAT DOES THIS TELL US?

Consumer experience is the new definition of relevance, powered by digitally enabled processes and people.

Every business is now a technology business.



Digital business models are disruptive. The rules have changed.

- **Under Armour** is not just selling shirts and shoes; it is a technology company connecting 38 million people on a digital health platform⁵
- **Red Bull** is not just a beverage company; it is a content media company spanning Web, social, film, print, music, and TV, creating brand experiences of joy, exhilaration, and adventure
- Hampton Creek Foods is not just a mayonnaise and cookie dough company; it is exploring the food potential of over 400,000 plant varieties to reimagine the future of food production⁶
- **Mink** is not just a cosmetics company; it is fundamentally transforming consumer perceptions of beauty and attractiveness

EXECUTIVE SUMMARY __

Burning platform: The pace of business requires digitization

Business at the speed of a moment

By 2020 it's expected that 4 billion people will have Internet access,⁷ there will be 6.1 billion smartphones in use⁸ and 50 billion smart things connected to the Internet.⁹

Consumers' capacity to communicate with each other and things, all the time and in real time, will help to generate unparalleled insights while simultaneously accelerating the pace of business to the speed of a moment, creating transient, technology-enabled opportunities that will have to be exploited dynamically to create moments of personalized differentiation.

These "moments" will rely on the ability to sense, analyze, optimize, and act in the moment and throughout the entire value network based on real-time market signals generated by the interaction of people, technology, and things, and supported by deliberately agile and flexible business processes designed to shift and adapt as needs and market opportunities change.

Transformation will not result from doing things incrementally better, but by doing things fundamentally differently.

Relevance is digital currency

In the digital economy, the volume, velocity, ubiquity, and fluidity of data – internal, customer, consumer, sensor, and more – are transforming. Value is transitioning from owning or selling data to leveraging it to sense, analyze, optimize, and act in the moment to deliver compelling and relevant value.

Relevance derived from insights based on realtime data will distinguish the new consumer digital business leaders – leaders that can right size, not one size, and can balance supply and demand in real time to deliver dynamic pricing, tailored services, and hyper-local segmentation.

What's more, real-time insights eliminate processes and practices that drive excess working capital – forecasting, inventory carrying, manufacturing capacity, and more. The result? Structured operations designed to produce efficiency at scale transform to dynamic processes that enable agility at speed.



18.7%

annual growth in ecommerce sales 2000-2013 vs. average 3.2% annual growth across all channels¹⁰

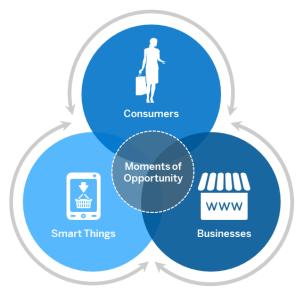


of consumers are interested in technology to customize and personalize products, and 19% indicate a willingness to pay a 10% price premium to customize or personalize the products they purchase¹⁰



hours is the time an average U.S. consumer spends per day with digital media, 51% of which is via a mobile device¹¹

REAL-TIME ENGAGEMENT: CONSUMERS, BUSINESSES AND THINGS



EXECUTIVE SUMMARY —

The future: The "consumer outcomes" digital enterprise

The consumer-driven digital enterprise

Digital business is a new frontier of growth and development, and leading companies will capitalize on new opportunities to deliver outcomes in moments of need – better, faster, and cheaper than previously possible – driving sustainable, profitable growth.

Attributes of a digital consumer company

- Intelligent value networks: Nearly everything in the physical and virtual consumer value network will be digitized and communicate in real time
- Agile and responsive: Consumer companies create and respond in real time to dynamic, transient moments of opportunity
- Digital customer and consumer engagement: Processes in sales, marketing, service, fulfillment, and more will be increasingly automated
- **Digital workforce engagement:** Every employee and associate is digitally enabled; collaboration is virtual and real time
- Digital operations: Manual operations become digitized, increasingly intelligent, and frequently automated

New digital business opportunities

New entrants and reinvented incumbents are reimagining business models, business processes, and work itself to create entirely new drivers for growth based on the capacity to capitalize on opportunities in the span of a moment.

- **Consumer moments:** Reaching consumers directly and immediately at the point of need with personalized engagement through digital venues such as commerce-enabled social networks, smart homes, smart cars, and smart shelves
- **Customer moments:** Drive category growth, increase sales velocity, and ensure on-shelf availability via digitally enabled collaboration with retailers and channel partners to simplify and streamline commerce and act in real time on demand dynamics
- Market moments: Responding in moments of market disruption to capitalize on new opportunities or mitigate risks with agile, flexible operations and business processes that can be coupled and decoupled as needed to identify new suppliers, suggest promotion opportunities, and automatically optimize forecasts, or modify capacity plans to meet future demand



of smartphone users say they consult their phones on purchases they're about to make in a store¹²



33%

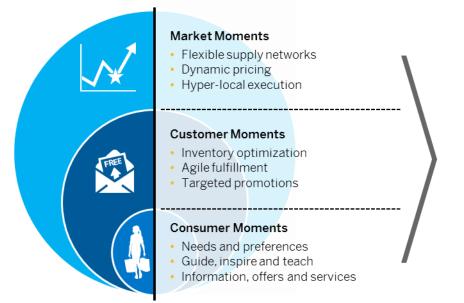
of consumers purchased from a company or brand other than the one he or she intended because of information received in a micro-moment¹³



\$1 trillion

or 28% of all retail sales influenced by mobile devices in 2014¹⁴

MOMENTS: NEW DRIVERS FOR GROWTH





EXECUTIVE SUMMARY _

Road map to Run Simple: The time to reimagine is now

DIGITAL TO THE CORE

For consumer companies pursuing ambitious growth strategies in an otherwise low-growth environment, the business operations that have been built for efficiency and scale lack the agility and flexibility to address the increasing complexity of new, non-traditional physical and virtual channels. Existing core retail channels, which, in many cases, may be declining in terms of revenue and margin contribution, are also problematic.

In this environment, striving to achieve incremental efficiency gains from existing, manual, capital-intensive structures and processes is the business equivalent of death by a thousand cuts.

New business models, business processes, and ways of working that fundamentally redefine and transform traditional levers of performance improvement are needed that:

- Deliver personalized products and services without the cost and complexity of increasing SKU counts
- Dramatically extend your brand value proposition at no incremental cost.
- Engage consumers in real time and at low cost to understand what they're thinking right now instead of making big bets based on speculation about what they might be thinking tomorrow
- Enable the flexibility and agility to sense, analyze, optimize and act, profitably, to orchestrate and deliver personalized, high-value outcomes directly in moments of consumer, customer, and market need

The time to reimagine is now. Digital is at the heart of your transformation opportunity.

REIMAGINING

Do you have the right strategy? Start by reimagining your business around outcomes enabled by and resulting from moments of customer and market opportunity.



REIMAGINE BUSINESS MODELS

Capitalize on moments of opportunity with entirely new business models for virtual vertical integration by transforming products to services and capitalizing on enterprise knowledge.



REIMAGINE BUSINESS PROCESSES

Enable flexible, agile processes to personalize consumer engagement, inform real-time consumerdriven innovation, and enable hyper-local demand and supply networks.



REIMAGINE WORK

Transform work from manual, rigid, processoriented, and policy-driven processes to dynamic, automated, knowledge-based, and opportunitydriven processes.

EXECUTIVE SUMMARY -

Fundamental changes: Five technology trends changing everything

We are witnessing an unmatched era of true business innovation. Breakthrough technologies have matured and hit scale together, enabling five defining technology trends:

HYPERCONNECTIVITY -



Every consumer, every business, and every machine is connected, disrupting all the established rules around business channels. Connectivity drives the movement of goods, services, people, knowledge and wealth.

SUPER COMPUTING



The limits of 20th century computing power are gone. Networking and in-memory computing allow for exponential improvements in modeling and simulation to improve innovation processes, demand and supply forecasting, consumer behavior analysis, and more.

CLOUD COMPUTING



Technology adoption and business innovation move at lightning speed. Technology infrastructure is now rented to eliminate barriers to entry. B2B and B2C transactions are moving to new cloud-based collaboration platforms, where millions of businesses, users, and consumers are connected in a matter of days.

SMARTER WORLD



Sensors, robotics, 3D printing, and artificial intelligence are the new normal, enabling the ability to sense, analyze, optimize, and act in real time to deliver on moments of consumer, customer, and market need.

CYBER SECURITY



Cyber criminals have expansive new capabilities to attack, undermine, and disrupt businesses. Trust remains the ultimate currency, giving security-focused businesses a significant advantage in brand reputation.

REIMAGINING

THE DIGITAL ECONOMY OFFERS INFINITE NEW OPPORTUNITIES

In a connected world where every consumer company is becoming a technology company, smarter products and services will refocus commerce on business outcomes, blur industry lines, and integrate physical and virtual value networks

DIGITAL INNOVATION IS REAL

Leading consumer companies are capitalizing on technology trends and rapidly evolving consumer expectations to reimagine business models, business processes, and work itself.



Connected and empowered consumers, intelligent value networks, and blurring industry lines are enabling new business models that orchestrate and deliver outcomes in the span of a moment.

- Integrate vertically, virtually. Compete as an ecosystem to deliver new value as information, offers, products, and services, complementary to consumer-driven outcomes at no or low incremental cost
- Share, rent, and optimize assets, infrastructure, competencies, and relationships to minimize capital expense, maximize flexibility and agility, and drive return on engagement
- Deliver products as services to transform consumers' perception of brands, from individual purchase and use to ongoing engagement and experience
- Capitalize on insights to create entirely new revenue streams, enabling consumer companies to differentiate on the basis of what they know rather than on what they own or make

New models

will be the catalyst for growth in the digital economy.



Flexible, agile business processes are smart and dynamic, designed to shift in real time to deliver outcomes in moments of consumer, customer, and market need.

- Personalized engagement with digitally enabled "just for me" consumers precisely in the moment of need and to help them achieve their goals and aspirations
- Real-time, consumer-driven innovation, leveraging direct consumer engagement to innovate and accelerate time to market with the right outcomes
- Virtual, hyper-local demand and supply networks are open, agile, and collaborative, enabling automation, flexibility, and speed at scale
- Virtual business networks enable real-time integration with global suppliers, allowing providers to engage based directly on market need
- Hyperconnected manufacturing integrates and communicates with every aspect of the enterprise and extended value network to optimize capacity and production output

Every process

can and will be modernized and digitized.



The singular-focused, task-oriented, full-time workforce transforms into the digitally enabled, dynamic, and agile consumer outcomes workforce, collaborating to orchestrate and deliver value in real time.

- Contingency-based operations enable flexible, variable-cost, dynamic operations that scale based on opportunity and need
- Redefining functions, leveraging digital capabilities to enable customers, consumers, suppliers, and partners to help drive differentiation and value at low or no cost
- Automated processes in procurement, manufacturing, fulfillment, inventory, service, and finance embedded with intelligence to provide ongoing feedback
- Simulated outcomes drive speed at scale, with modeling and simulation to quickly identify best options
- Trusted transparency to enable front-line decision making with realtime visibility to all data, consumers, customers, partners, suppliers, and employees

Work itself

will transform, and all employees are digital employees.



Connected and empowered consumers, intelligent value networks, and blurring industry lines are enabling entirely new business models based on the capability to orchestrate and deliver high-value outcomes in the span of a moment.

Integrate vertically, virtually

Focus on moments to identify and orchestrate entirely new and perhaps previously unattainable dimensions of value delivery at no or low incremental cost.

- Differentiate on the basis of flexible and agile execution throughout the entire value network to deliver vertically integrated outcomes, virtually
- Enable previously unviable partner ecosystems to orchestrate personalized information, offers, and services tied to consumption, use, and market need
- Couple and decouple with partners seamlessly across physical and virtual networks with real-time information exchange as customer, consumer, and market needs change
- Collaborate with service and knowledge-based partners to deliver fundamentally new and differentiated consumer value propositions

Share, rent, and optimize

In the digital economy, assets and competencies are available virtually and can be capitalized and shared to optimize capacity, localize fulfillment, and orchestrate outcomes

- Digitize and share excess capacity and competency to monetize capital expenditures on plant, equipment, and other capital-intensive investments
- Upend traditional metrics that drive efficiency at scale to minimize cost per unit to focus instead on agility at speed to maximize return on engagement
- Digitize process and service capacity and functional competencies to optimize utilization and build new revenue streams

Deliver products as services

Evolving models and embedded sensors create new revenue streams by transforming consumers' brand perception from individual purchase and use to ongoing engagement and experience.

- Add information services and content subscriptions, maintenance agreements, or replenishment services available right in the moment of need
- Explore category-specific options for leasing, pooling, or sharing product functions versus selling product ownership
- Transform value propositions to desired outcomes such as flavors, nutrition and wellness, comfort, reliability, security, control, and more

Capitalize on insights

The value of physical assets and even intangible assets such as brand equity are eroding. In the new digital economy, what you know will be more valuable than what you own or what you make.

- Combine consumer and market insights to orchestrate outcomes based on a deep understanding of preference and opportunity, in context and in the moment of consumer need
- Virtual assets such as consumer insights, network reach and coverage, and ecosystem commerce potential are the new drivers of growth, differentiation, profitability, and market value

Mink's service enables consumers to capture colors that resonate with their personal style, match the colors via a mobile app and "print" cosmetics on demand.¹⁵



Nest and Whirlpool are partnering to orchestrate consumer experiences with no direct investment in physical assets, staffing, or finished goods.¹⁶



Under Armour is reimagining itself as a technology company to elevate to a Connected Fitness experience for millions of people around the world.¹⁷



Flexible and agile business processes are smart and dynamic, designed to shift in real time to deliver outcomes that capitalize on moments of consumer, customer, and market need.

Personalized engagement

Digital consumers are "just for me" consumers, expecting personal and easy experiences precisely in the moment of need and designed to help them achieve their goals and aspirations.

- Products are configurable and personal, tailored to individual consumers' needs and preferences
- Information and offers are aligned to consumer preferences and presented at the moment of need
- Seamless and fluid channel experiences enable consumer engagement and fulfilment anywhere
- Sensors monitor use, consumption, wear, and freshness, alerting consumers to replace, replenish, or repair, just in time

Real-time, consumer-driven innovation

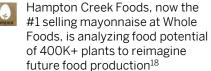
Innovation leverages real-time direct consumer engagement to accelerate time to market with the right solutions and outcomes at the right time.

- Eliminate the time, cost, and uncertainty of interpreting and predicting shifting trends with qualitative market research
- Build consumer advocacy during development cycles via social engagement to help ensure market adoption and drive category growth post-launch

Virtual, hyper-local demand and supply networks

Local is no longer defined by fixed locations. In the digital economy, "just for me" consumers define local as wherever they happen to be. Meeting them where they are requires open, agile, and collaborative cross-channel demand and supply networks.

- Enable agile, cost-effective supply network execution for direct-to-consumer fulfilment
- Automate and optimize short- and medium-term forecasting via real-time integration for supply and demand collaboration across functions





Frito-Lay is reimagining innovation as a consumer contest, driving +12% YoY sales growth with simultaneous engagement and advocacy.¹⁹ LEGO

Lego, anticipating the emerging threat from 3D printing, developed apps for interactive cities, tailored sets and other experimental products, leading to quadrupled revenue over 10 years.²⁰

• View individual orders or shipments as profit or cost centers to measure customer or even consumer-specific performance with ubiquitous information availability

Virtual business networks

Frictionless supplier networks enable real-time integration to couple and uncouple with consumer companies based directly on market need.

Real-time information access and cross-network transparency transforms supply planning to enable just-in-time availability while streamlining and eliminating inventory and safety stock Enable network agility to adjust quickly and profitably for weather, natural disasters, and disruptions from unforeseen events

Hyperconnected manufacturing

Sensors, smart machines, and algorithms are automating and connecting manufacturing processes with every aspect of the enterprise and extended value network to optimize capacity and production output.

- Sensors monitor asset utilization and health, predicting potential issues and maintenance needs
- Fixed manufacturing schedules become agile and flexible via ongoing, real-time data sharing with global supply networks
- Capacity plans are updated directly and automatically through automated integration with supply network demand forecasts
- Consumers and homes connect directly to manufacturing capacity through smart things that monitor real-time consumption and use this information to exponentially improve demand forecasting and production planning

REIMAGINE EVERYTHING



The singular-focused, task-oriented, full-time consumer products workforce transforms into the digitally enabled, dynamic, and agile consumer outcomes workforce, collaborating in real time to orchestrate and deliver value in consumer, customer, and market moments.

Contingency-based operations

Enable a flexible, variable cost operation and workforce that scales dynamically based on business opportunity and market need.

- · Reassess full-time staffing and rationalize talent toward differentiating skills like data science, consumer insights, and engagement
- Eliminate or assign to contingent labor analog, manual processes in customer service, manufacturing, finance, and other areas
- · Enable dynamic service delivery by brand ambassadors, along with the capacity to track, manage, and assess quality of service delivery
- Leverage shared capacity and knowledge to ramp business operations up or down and improve competencies as needed at a low cost

Redefine how and where work gets done and who does it

Leverage digital capabilities to distribute varying functions to consumers, customers, partners, and suppliers to drive differentiation and value at low or no cost.

- · New technologies like 3D printing are enabling consumers to complete finished goods production
- Direct-to-consumer fulfillment is transferring logistics operations and costs to third-party providers and consumers
- · Real-time consumer engagement is eliminating the need for qualitative research and minimizing investments in agency relationships

Simulate and optimize outcomes

Previously sequential processes are now simultaneous, agile, and responsive, enabling speed at scale with modeling and simulation to guickly identify best options.

Collaborate in real time across functions and with customers, channel partners, and suppliers to orchestrate outcomes in moments of need



ConAgra analyzes cost inputs, cost decomposition, volume, and trade against shared KPIs to model and predict product and customer profitability.²¹

- Simulate outcomes considering implications and issues across internal and external teams. Align on best options versus common enterprise objectives
- · Leverage real-time data to ensure changes are accounted for across complementary functions

Automate intelligent processes

Embed intelligence to monitor and automate processes end-toend in real time, streamlining decision making based on predefined rules and tolerances and limiting intervention to exceptions.

- · Elevate the workforce to exception handling, simulating, and optimizing outcomes; proactive risk management
- Streamline manufacturing and fulfillment with new technologies like robotics and 3D printing
- Automate routine processes like order processing, replenishment, and deductions through integration with functions, retailers, partners, and financial institutions
- Transform ad hoc marketing and services to real-time consumer engagement
- Break linear and time-bound cause-and-effect cycles via ongoing process monitoring

Transparency and trust

Trust accelerates seamless relationships, and with real-time visibility to all data, consumers', customers', partners', suppliers', and employees' expectations for transparency have radically and forever changed.

- Complete materials, ingredients, and traceability visibility ensures consumer confidence and supplier accountability while mitigating brand, financial, and regulatory risk
- Offer consumers options to validate organics and trace ingredients and inputs to origin to build and sustain consumer trust from farm to fork and from sheep to shop
- Guarantee authenticity and quality, eliminate fraud and counterfeiting risk while minimizing waste and costs



Colgate is aligning and visualizing crossfunctional enterprise information in real time to enable the boardroom of the future.²²

SAP HANA: THE GREAT SIMPLIFIER

How does reimagining happen?

Being a leading consumer company in the new digital economy means capitalizing on moments of opportunity to orchestrate personalized, differentiating outcomes enabled by fundamentally new and different approaches to the market that redefine revenue, cost, and reach.

Moving from batch processing to real-time processes enables consumer companies to capitalize on moments of consumer, customer, and market opportunity. But this requires new thinking – adopting low-cost, digitally enabled agility and flexibility as core operating principles, informed by the ability to sense, analyze, optimize, and act intelligently in the moment.

Transforming brand perception from traditional concepts of price and value by orchestrating the delivery of personalized, differentiating outcomes like joy, confidence, security, and control means making the transition from products to services and executing in the moment across frictionless business networks of suppliers, partners, customers, agencies, and more.

Orchestrating and delivering outcomes in the moment requires fundamentally new and different approaches to the market where sales are no longer measured in units, where cost is unbound from traditional drivers and physical structures, and where reach is no longer about influencing along the path to purchase but, rather, creating the gateway to an outcome.

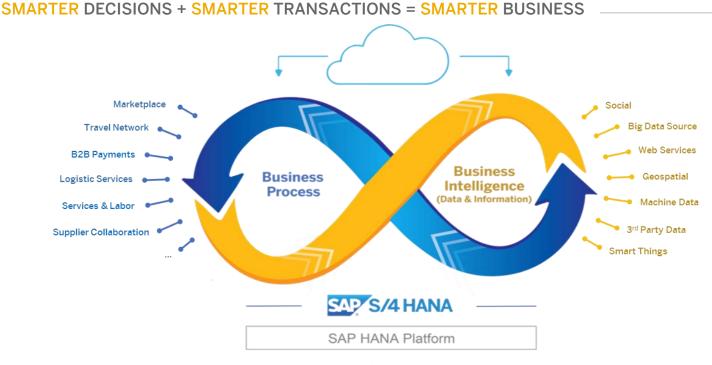
Only SAP can help consumer companies orchestrate outcomes in real time based on moments of opportunity:

Only SAP can deliver the combination of the real-time platform, business processes, and business intelligence required to give consumer companies the agility and flexibility needed to orchestrate and deliver outcomes based on moments of consumer, customer, and market need.

This agility and flexibility involves two key concepts: simplification and innovation, both based on the SAP HANA platform for real-time, in-memory computing.

- Simplification is all about doing what we are already doing, but better, faster, and cheaper
- Innovation is all about reimagining business models, business processes, and the nature of work itself

The diagram below is at the heart of the digital business transformation, bringing together transactions and analytics on the same platform, uniting structured and unstructured data, and enabling companies to sense, analyze, optimize, and act in moments of opportunity. This approach will forever change the way businesses plan, scale, innovate, engage, and compete.



DIGITAL BUSINESS FRAMEWORK

A SIMPLE AND PROVEN APPROACH TO VALUE CREATION THROUGH DIGITIZATION

Every company across all industries requires a simple digital approach to build a pragmatic and executable vision of its digital strategy.

DIGITAL BUSINESS FRAMEWORK

Every company needs to think about digitization across five key pillars

SAP understands technology innovations, and the everchanging implications and requirements of those innovations are big challenges for consumer companies. The reimagining process helps crystalize future business models to drive longterm profitable growth.

As a result, we have built a structured framework to demonstrate how to develop and execute on a digital business strategy: the digital business framework. With this framework, the entire value network will be digitized, including the core which serves as the platform for innovation and business process optimization. Every company can develop a digital strategy across these five pillars:

- 1. Re-platform **core business processes** and bring together transactions and analytics in real time to be smarter, faster, and simpler
- 2. Deliver **consumer and customer experiences** based on outcomes driven by moments of need
- 3. Enable a smarter and engaged **workforce** across all employees and contractors
- 4. Drive **supplier** and partner collaboration to accelerate growth and innovation
- 5. Harness **assets** and the **Internet of Things** to drive real-time insights and new business models





THE DIGITAL CORE

Enterprise management, a new generation of enterprise resource planning, running in **real time, integrating predictive, data, and mobile,** will change how we work, how we run our businesses, and how information is consumed. **The future is here.**

Advanced in-memory computing eliminates the limitations of running in batch mode and building complex procedures to get around technology limitations. You can run simply and unleash the full power of the digital business.

Real time

Optimizing parallel requirements of real-time customer, consumer, and internal data with real-time business processes will transform what was once the sequential, time-bound consumer path to purchase to a real-time, dynamic gateway to consumer outcomes.

Predictive

Insights gleaned from real-time data and real-time business processes will expedite employee decision making and illuminate market dynamics and trends. Consumer companies won't have to guess what might happen; they'll predict what will happen and why it will happen based on direct consumer engagement.

Agile

Predicting business outcomes enables agile companies to rapidly enter new markets, acquire and onboard new companies, or reflect an organizational change in one-tenth of the time it takes with today's systems.

Consumer grade

Every employee is a consumer with high expectations for user experience. Exceeding those expectations is critical and drives adoption, user engagement, productivity, and agility .

Simplify with SAP

SAP S/4HANA is the only end-to-end solution that covers all consumer business processes and runs inmemory. The real consideration here is how and when you use such a breakthrough in business applications.

SAP S/4HANA can enable a complete view of consumers by merging consumer profiles with behavioral data from multiple channels, allowing marketing, sales, supply chain, manufacturing, and innovation to respond with personalized, outcomebased products and services.

SAP S/4HANA and artificial intelligence create the potential for a whole new user experience and way of working. This drives productivity by sensing, analyzing, optimizing, and acting precisely in the moment of need.



SAP HANA PLATFORM

87%

of finance executives agree that meeting growth targets requires **faster data analysis**, but only 12% are able to respond to information requests in real time²³

40%

of today's Fortune 500 companies on S&P 500 will no longer exist in 10 years²⁴

52%

of manufacturing companies expect to be highly vertically integrated in the next five years²⁵



CUSTOMER EXPERIENCE

Digital technology has **changed the game**, but consumers **changed the rules**. Consumers now demand simple, seamless, personalized experiences across **any channel**, **anytime**, **anywhere**, **and on any device**.

Three key forces are reshaping the customer and consumer experience:

Consumer power

Consumers have immediate access to products, materials and ingredients, sources, pricing, quality, and availability information, and can decide what they want, anytime and anywhere.

Customer journey

Consumer power means consumers' and shoppers' path to purchase is no longer linear or time bound. Instead, the "journey" is now a real-time, dynamic gateway to an outcome.

Real-time engagement

Companies that can sense, analyze, optimize, and act in real time and can respond to or create consumer, customer, and market moments, enabling new opportunities to orchestrate outcomes on consumers' behalf.

Digitize your end-to-end customer experience with SAP

A single platform that brings together marketing, sales, services, and commerce, fully integrated in real time with back-office processes in supply chain, manufacturing, procurement, and finance to ensure seamless digitization of the entire consumer experience. SAP solutions for customer engagement and commerce powered by the SAP HANA platform enable a 360degree view of your consumers and customers, real-time interaction, and sophisticated predictive analytics, fully integrated with core transactional systems.

- Orchestrate business outcomes delivered across marketing, commerce, sales, and service
- **Deliver personalized experiences** in the moment and in context with each interaction
- Create a single, harmonized experience for your consumers while minimizing costs and streamlining employee engagement
- Engage consumers and customers anywhere and at any moment in their journey
- Fully integrate with your core business processes

Marketing VIDEO SHARING SOCIAL Services MOBILE Sales SELF QUOTE TO CASH SERVICES CUSTOMER EXECUTION PHONE SMS **_**9 eCOMMERCE TRADE RETAIL Commerce

70%

of customers are "very satisfied" when their needs are met over three or more touch points²⁶

55%

Of consumers conduct product research using technology²⁷

37%

Of consumers use mobile apps to help them shop²⁷



WORKFORCE ENGAGEMENT

The world is getting **smarter** in the digital economy, but **complexity still hampers the workforce**.

People are working as hard as ever, but not necessarily accomplishing more. Workers demand access to smart, consumer-grade technology to work faster, better, and more efficiently. Organizational complexity is increasing costs and slowing progress.

Employee engagement

Every employee is now a digital employee, operating more collaboratively with different motivations and opportunities to be more productive and grow their careers

Contingent labor

Flexible hiring and staffing practices based on seasonality, market opportunities, consumer segments, and business performance provide an effective means for keeping fixed costs down.

Organizational change

Adjusting and adapting to the new reality is becoming more and more important. Continuous training and enablement is needed for the smart and adaptive enterprise.

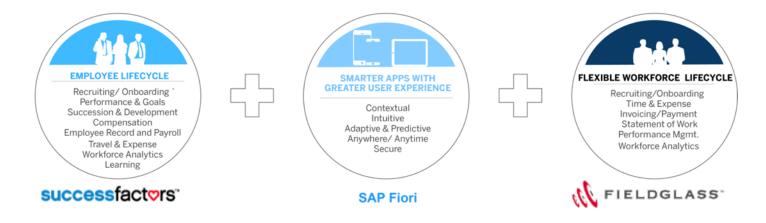
Complexity

Enable employees to overcome the complexity of developing consumer intimacy, responding in the moment, and driving profitable growth.

Improve your total workforce productivity: Simplify with SAP

Digitize your workforce with SAP: SAP S/4HANA + SAP SuccessFactors solutions + SAP Fieldglass solutions + SAP Fiori provide the tools for total workforce engagement and advanced analytics.

- Attract the best workforce
- Recruit and onboard the best workforce, simplify their work, and ensure that regulatory and compliance requirements are met **Manage the total workforce lifecycle**
- Manage the total workforce lifecycle from recruiting to onboarding, performance, compensation, and learning, all in one place • Smarter apps with greater user experience
- Enable the workforce to easily access the right information across any device and through a dramatically simplified user experience



<mark>83</mark>%

of executives indicate they're increasingly using contingent workers – at any time, on an ongoing basis²⁸

34%

of executives feel that they've made progress in building a workforce that can meet future business goals²⁸

30%

of executives say their companies give special attention to the particular wants and needs of millennials²⁹



BUSINESS NETWORKS AND SUPPLIER COLLABORATION

Trillions of dollars of commerce moving in silos + millions of companies attempting to innovate on their own = lost opportunity to improve the lives of billions of consumers.

Reimagining business processes as an orchestrated network of networks enables consumer companies to scale appropriately and improves consumer outcomes and experiences.

Consumer experience

Business applications must be intuitive, simple, engaging, and secure. Complexity, unreliability, and uncertainty discourage users - most especially consumers - while undermining trust and destroying brand value.

Network of networks

Shifting demographics are revealing unmet consumer needs, creating opportunities to deliver new high-value outcomes in moments of need by collaborating with networks of customers, suppliers, partners, agencies, contingent labor providers, and more.

Business connectivity at scale

The greatest challenge and opportunity in connecting vast ecosystems involve the exponential data growth generated and consumed by the network. Connecting millions of partners and processing petabytes of data in real time are core requirements to becoming the de facto platform standard. Only SAP offers the platform to meet this challenge.

Connect business to the world and the world to your business

SAP S/4HANA gives you the capacity to digitize business processes across your internal and external business operations. It is the connection to your customers' global partner ecosystems that enables you to extend those processes externally beyond the four walls of vour business.

- Today's cloud solutions from Concur, Ariba, and Fieldglass are #1 for travel and entertainment, direct and indirect material, and labor and services - connected, effortless, and at scale
- · Business networks operate on a global basis, meet data security standards, and operate at industry-best standards
- Partner services can vastly extend the value of core offerings



50%

Networked companies are 50% more likely than their peers to have increased sales, higher profit margins, and be a market leader³⁰

20%

inventory reduction via customer collaboration by providing materials at the optimal time³¹

25-50%

of travel bookings are "out of compliance" with limited corporate control or visibility³²



ASSETS AND THE INTERNET OF THINGS

The most **dramatic change** in the digital economy will be driven by hyperconnectivity and big data science. These will **transform nearly every utility business model**.

Consumer companies are finally understanding the full potential of the interlock between physical and digital assets and Internet of Things to connect consumers, businesses, and smart things. We are witnessing new use cases with breathtaking results.

Automated manufacturing and connected logistics

Leading consumer companies are embedding sensors in production equipment and packaging, tracking raw materials through to finished goods, from supplier to shop floor to consumer delivery.

Smart things

Unlocking the power from sensor-provided information from manufacturing, logistics, packaging, smart shelves, smart things, and smart homes is transforming consumer companies' ability to sense, analyze, respond, and act in real time.

Context-aware

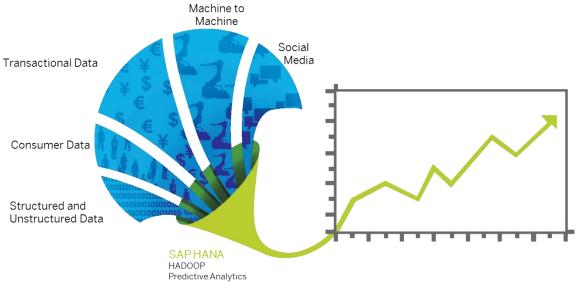
A modern enterprise management system can leverage location, identity, activity, and time provided by omnipresent sensors to sense, analyze, optimize, and act in context directly in moments of consumer and customer need.

Consumer intimacy

Context awareness allows companies to engage with consumers directly in real time and, increasingly, all the time. Leveraging these real-time consumer engagements enables companies to build deep intimacy, anticipate demand, and respond to moments of consumer need with personalized experiences that delight.

Connect, transform, and reimagine with SAP

With the SAP HANA platform, Internet of Things edition, organizations can now take embedded device data, analyze this data into information in real time, and leverage the information across the value network to drive business insights and create new business models.



40% Developing economies could generate nearly 40% of the IoT total value impact by 2025³⁵

4 billion

202033, 34

Internet users and

an expected 50

billion connected devices by

\$4–11 trillion

estimated potential economic impact of the Internet of Things per year by 2025³⁵

SAP HANA PLATFORM – A NEW COMPUTING PARADIGM

SAP HANA is the ultimate simplifier and the platform for innovation and digital business

Dream, develop, and deliver with SAP HANA Cloud Platform

SAP HANA Cloud Platform gives you the mobile, collaboration, integration, and analytics capabilities you need to dream big, develop fast, and deliver everywhere, with the following capabilities:

Application extensions

Extend your current cloud and on-premise solutions for additional customization, enhanced business flows, and more.

Real-time analytics

Engage customers, consumers, suppliers, partners, and agencies. Optimize business processes, and unleash new revenues with real-time analytic apps, all powered by SAP HANA.

New cloud apps

Quickly build innovative, consumer-grade industry apps for today's always-on, mobile, social, and data-driven world.

Extended storage capabilities

Holistically manage all structured, unstructured, and infinite data streams with flexible combinations of data stream processing, in-memory technology, disk-based columnar storage, and Hadoop-based storage solutions.

Data footprint reduction

Significantly reduce memory footprint and TCO. In ERP systems, we have seen ~6x reduction by SAP HANA's dictionary compression. Removing aggregates and actual and historical data separation further reduces the footprint up to ~10x.

Groupe Danone

Groupe Danone is leveraging SAP HANA Cloud Platform to win over 7 billion customers and differentiate itself from competitors.

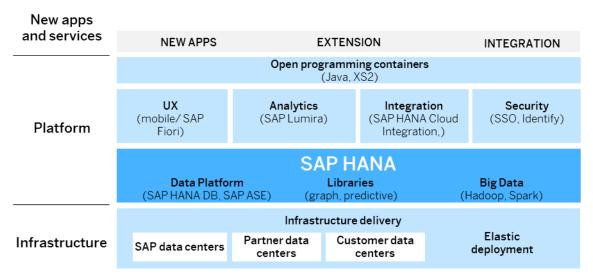
"We see a huge potential to easily and very rapidly develop very beautiful user-friendly applications, which are opening new opportunities to connect our consumers to our back-end systems, and that really is our strategy for the future."

"What we see is that IT solutions provided by SAP can help us to grow as fast as we did in the past, and to keep the pace that we can explore new markets, new opportunities in the digital world together with our consumers."^{36,37}

Source: Ralf Steinbach, Director Software Architecture, Groupe Danone

The SAP HANA platform is...

Real-time, in-memory platform • 10x data footprint reduction for ERP • Extended storage, including Hadoop • Open architecture • Developer-friendly • Embeds mobile and analytics • Secure • Cloud-ready

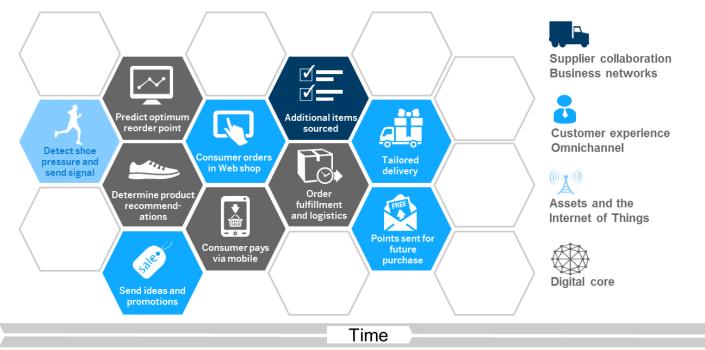


HOW DOES IT ALL COME TOGETHER? – EXAMPLE

Reimagine fashion and apparel

While the five digital business pillars deliver significant value as stand-alone capabilities, the ultimate goal is to design the next generation of business processes that will span across all the digital pillars. Consumer experience will not stop at the channel experience; supply chain and services have to be aligned with the consumer experience strategy if products and services are to be delivered as promised.

EXAMPLE: FASHION AND APPAREL



Leading consumer companies are leveraging digital technologies to serve consumers in moments of consumer need – in this case, the moment the consumer needs new running shoes.

Sensors in the shoe monitor pressure and wear relative to use and purchase date, dynamically predicting the optimal time for the runner to buy a new pair.

At that moment, the company automatically notifies the consumer that the time is right to replace his or her running shoes. It provides information on usage and wear, and offers the runner recommendations on which new shoes to purchase and offers for those shoes, tailored to the consumer individually based on that consumer's exercise patterns and physical needs, such as cushioning and arch support.

These offers also include other cross-sell opportunities matched to the runner's needs, such as offers for a jacket or gloves along with running gear to help the runner maintain regular exercise frequency during the upcoming winter months. Once the runner chooses the best combination of tailored recommendations, he or she completes the order online, designating options for automated payment, shipping, and delivery.

The additional items the runner chose are automatically picked and included in the order, and the shoes and other purchased items are sent to the desired pickup or delivery location. Finally, any loyalty points or rewards are credited to the consumer's profile to prepare for and facilitate future purchases.

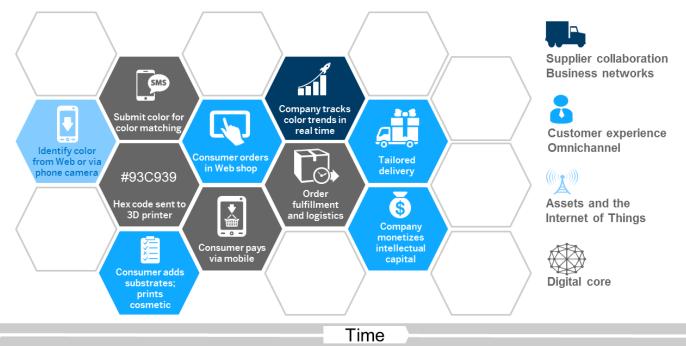
The diagram above demonstrates how leveraging the digital value network can deliver a personalized experience. The benefits of this scenario are significant:

- Better consumer engagement and insights
- Stronger competitive differentiation
- Compelling and holistic brand experience
- New services and revenue streams

HOW DOES IT ALL COME TOGETHER? – EXAMPLE

Reimagine personal care

New technology-driven entrants are disrupting home and personal care, offering consumers entirely new arrays of choice while fundamentally redefining consumer perceptions and expectations.



EXAMPLE: PERSONAL CARE

Companies are now using 3D printing to enable consumers to "print" makeup by selling an affordable, branded 3D printer and the core substrates required to print the cosmetics. These companies enable consumers to choose a color from anywhere – a Web site or social media, by taking a photo on their mobile phone, etc. – and submit the color for matching via an app. Once complete, the app sends a color code to the 3D printer to create the cosmetic.

Because most makeup, from high-end brands to value-based private labels, is made from the same core substrates, these companies can source the same substrates as the premium fashion and cosmetics brands and produce finished products comparable to that of premium brands, helping to ensure a positive consumer experience.

However, what's most compelling is the shift in market dynamics these companies are enabling.

Here, beauty and attractiveness are defined by the consumer – "for me, by me, right here, and right now." These new entrants have discovered how to monetize a consumer moment – the moment in time when a consumer spots a color and develops an idea to enhance their own beauty and attractiveness.

And, relative to their larger, more established competitors, these companies are doing all of this with:

- No investment in qualitative research to predict color trends
- · Minimal and very streamlined finished goods inventory
- · Few or no manufacturing processes
- Direct-to-consumer fulfilment exclusively through third-party logistics providers and paid for by the consumer
- Minimal R&D cost and regulatory risk
- A fraction of the full-time employee base

HOW DOES IT ALL COME TOGETHER? – EXAMPLE

Reimagine durables

Appliances companies as well as new technology-enabled consumer electronics companies are disrupting the consumer durables segment by adding digital interfaces and sensors to previously analog devices, transforming consumers' perceptions of utility, value, and control.

Supplier collaboration Business networks 7 Predict optimum Additional items reorder point sourced **Customer experience** Omnichannel Machine onsumer orders in Web shop Monitor use detects low detergent age, and wear \odot ((((•••)))) Determine product Order Assets and the fulfillment recommendand logistics Internet of Things ations Predictive maintenance Consumer pays via mobile for machine health **Digital core** Send pack size recommend ation Time

EXAMPLE: CONSUMER DURABLES

Adding digital interfaces makes appliances like washing machines easier to use, while also redefining consumers' perception of utility and value.

For example, consumers used to clean clothes on the basis of two or three combinations of options – water temperature, fabric type, and cycle time. The consumer also had to determine which combination of the three would deliver the best results depending on the clothing he or she planned to wash.

Now, consumers choose how to wash their clothes based on desired outcomes – deep clean, sanitize, quick wash, wrinkle free, etc. The machine's intelligence calibrates the variables to achieve those outcomes on the consumers' behalf, rather than the other way around.

Companies are now also embedding sensors into their appliances. Web-connected sensors detect detergent use and consumption, enabling consumers to re-order detergent and fabric softener automatically as needed, adjusting volumes and package sizes to ongoing consumption and use. Sensors also monitor water, energy, and detergent use to recommend ways to minimize and optimize energy consumption and waste. They offer options for managing appliances from mobile devices, as well as coordinating appliance use with other devices based on options, for example, to run during off-peak hours.

More practically, sensors are now also monitoring the "health" of the appliances, giving appliance makers the capacity to monitor age and wear and tear, and to predict maintenance, improving forecasting for replacement parts, planning for services delivery, and minimizing the risks of warranty claims and other potential product-related liabilities.

Incremental investments in digital technologies enable:

- Digital interaction with other appliances and things via standards-based platforms
- · Previously impossible avenues for consumer engagement
- Real-time forecasting and planning based on actual demand from within the home
- Low obsolescence and write downs
- · Materially reduced service cost and liability risk

WHY SAP?

400

BUSINESS DIGITIZATION IS A NATURAL NEXT STEP FOR THE #1 BUSINESS APPLICATION COMPANY

It took years of innovation, strategic investment, and the forging of new strategic relationships to build the end-to-end digital business platform.

SAP IS COMMITTED TO INNOVATION





One-day financial close

With the SAP HANA platform, Unilever has accelerated financial close processes, reducing month-end close cycles to just one day using half the staff.³⁸



End-to-end channel visibility

With the SAP Fashion Management application and the SAP HANA platform, the adidas Group has **complete visibility from the factory to e-commerce channels** with point-of-sale data analysis that provides a better understanding of consumers, **helping replenishment with the best-selling products**.³⁹



Global market share analysis

With the SAP Demand Signal Management application powered by SAP HANA, Beiersdorf can analyze various product attributes and **collect intelligence to gain extensive insight into local and global market share** development, brand health, and overall market competition⁴⁰

END-TO-END DIGITAL BUSINESS SOLUTION

Through our innovations and over \$30 billion in strategic acquisitions, SAP has the best solution portfolio and expertise required to enable your digital business strategy. SAP is the largest cloud company with 80 million+ users and has the fastest growing solution portfolio to support the entire digital value network. With 74% of the world's transactions running through SAP, 7,200+ customers leveraging SAP HANA and 1,600+ customers leveraging our Internet of Things technologies to drive new business models, SAP is the preferred choice to turn your digital vision into reality.



SAP will bring expertise, assets, and the proven methodologies required to support the development of your digital business strategy. These capabilities will be leveraged throughout SAP's collaborative value and innovation framework.

EXPERTISE

- **40 years** experience in consumer products
- **86%** of consumer products companies on the Forbes 2000 use SAP
- 10 of the top 10 largest food, beverage, home and personal care, and durables companies use SAP
- **14,000+** consumer products customers worldwide
- **6,000+** Design Thinking experts sales, services, development

ASSETS

- **60+** business process benchmarking and best practice assessments
- 600+ industry-focused innovation scenarios
- Innovation case studies by industry
- Infrastructure to drive proofs of concept
- **13+** co-innovation and living labs with **470+** customer co-innovation/ Design
- **4/0+** customer co-innovation/ Design Thinking discussions from 2014 to date

METHODOLOGY

- Business case methodology
- Design Thinking
- Benchmarking
- Value partnership framework

SAP GLOBAL SERVICES AND SUPPORT TO DRIVE YOUR SUCCESS

In the digital economy, simplification and business innovation matters more than ever. SAP has a broad range of services to cover the end-to-end digital transformation journey, ranging from advising on a digital innovation road map and plan, to implementing with proven best practices, to the ability to run across all deployment models, and ultimately optimize for continuous innovation across your digital journey. SAP provides both choice and value within our services, allowing you to tailor the proper approach based on your needs.

Turn to the 30,000 consultants and support professionals who can bring your digital strategy to life. SAP's global service and support model provides a consistent experience – on premise, cloud, or hybrid. SAP's global service and support provide the expertise, assets, and the proven methodologies required to accelerate business innovation, reduce TCO, and run a stable platform (on premise or in the cloud).

SAP Activate is a new, simplified consumption experience introduced for SAP S/4HANA and cloud adoption. It provides a combination of SAP Best Practices, methodology, and guided configuration. In addition, we provide leadership in learning to drive quick time to value realization and a solid engagement foundation with SAP MaxAttention, SAP ActiveEmbedded and SAP Value Partnership across the end-to-end customer lifecycle.

SAP HANA Enterprise Cloud is the optimal springboard to the cloud for customers. It offers an attractive option for organizations that are eager to leverage SAP latest innovations such as SAP S4/HANA, with the peace of mind that SAP is in the drivers seat.



ADVISE

Simplify and innovate

- Digital innovation road map and plan
- Co-innovation by industry

IMPLEMENT with proven best practices

Implement with SAP Activate

- Simplified consumption experience for SAP S/4HANA
- SAP Best Practices, methodology, and guided configuration



Run with one global support

One global, consistent experience End-to-end support – on premise, cloud, hybrid

OPTIMIZE for continuous innovati

for continuous innovation

Optimize to realize value

 Continuously capture and realize benefits of digital transformation

Learn | Extend/innovate | Engagement foundation | Support

SAP COMPREHENSIVE ECOSYSTEM

Orchestrating the world to deliver faster value

Our comprehensive ecosystem for the consumer products industry offers:

- Integration into a wide range of business services (suppliers, banks, key vendors, travel, etc.)
- Open architecture: choice of hardware and software
- Complementary and innovative third-party solutions
- Reach partners to serve your business of any size anywhere in the world
- A forum for influence and knowledge
- A large pool of industry experts with broad and deep skill sets

BUSINESS NETWORK

- 1.9M suppliers
- 200 major travel partners (air, hotel, car)
- 50K service and contingent labor providers

INFLUENCE FORUMS & EDUCATION

- 32 user groups across all regions
- 40+ industry councils
- SAP community>24 million unique visitors per year
- 1,800 SAP University Alliances



INNOVATION

- 1,900+ OEM solution partners to extend SAP solutions
- 2,000 startups developing SAP HANA apps

ADDITIONAL RESOURCES

Outlined below is additional external research that was used as supporting material for this white paper.

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*Note: All sources sited as "SAP" or "SAP benchmarking" are based on our research with customers through our benchmarking program and/or other direct interactions with customers Note: Some images used under license from Shutterstock.com

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