Consumption Consumption What's your Function: Changing Financial Models and Impact to Buying Behavior

Rob Brothers

- Industry & Market Overview
- Competitive Landscape
- Buyer Perspective
- Future View of the Market
- Advice for the Technology Provider

Key IT Market Trends

Digital transformation initiatives intensify

- The digital experience economy will require improved customer engagement, operational efficiency, and workforce agility
- Innovation will be core to strategic differentiation
- Higher levels of performance will drive adoption of 3rd platform technologies

Cloud adoption continues across IT

- Rip-and-replace still not the norm, but transition is accelerating
- Managing migration while maintaining IT service delivery is critical, creating complex support picture

Transformative technologies gain traction in key areas

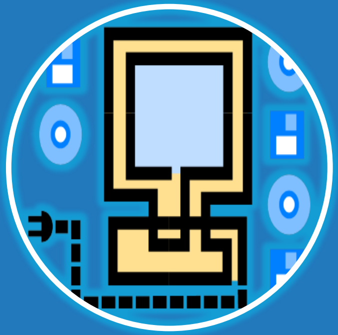
- IoT opportunities expand across verticals
- AR/VR, cognitive and AI will grow across industries and lines of business
- Cognitive Systems

HOWEVER: enterprise IT organizations are still slow to change

- Legacy apps powering day-to-day operations will be replaced slowly
- Typical of enterprise IT
- Many current on-premises software installations aren't going anywhere

Source: IDC, IDC FutureScape: Worldwide IT Industry 2017 Predictions, #US41883016

Mega support trends: Analytics, Cognitive, and AR/VR



Patch plans tailored to specific IT requirements

“Personalized” self-diagnosis and resolution, M2M

AR to help field techs resolve issues faster

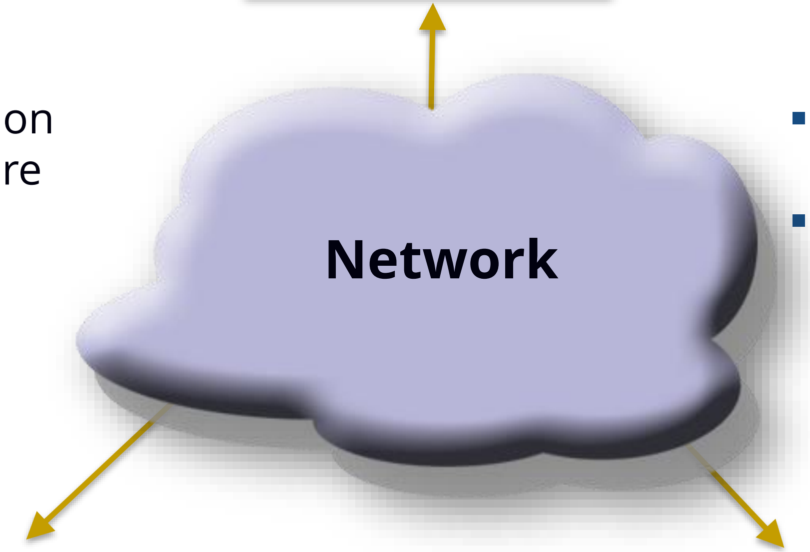
Predictive analytics with automated diagnostics and repair

COMPREHENSIVE ANALYTICS ACROSS IT ENVIRONMENT

Connectivity for IT and OT

Tools for vendor-driven support delivery

- Access to customer and system data
- Device-independent diagnosis and resolution
- Delivery from anywhere with WiFi (or other protocol)



Tools for support customers

- Mobile access to all relevant support issue data
- Service request tracking and management
- Remote diagnosis and resolution

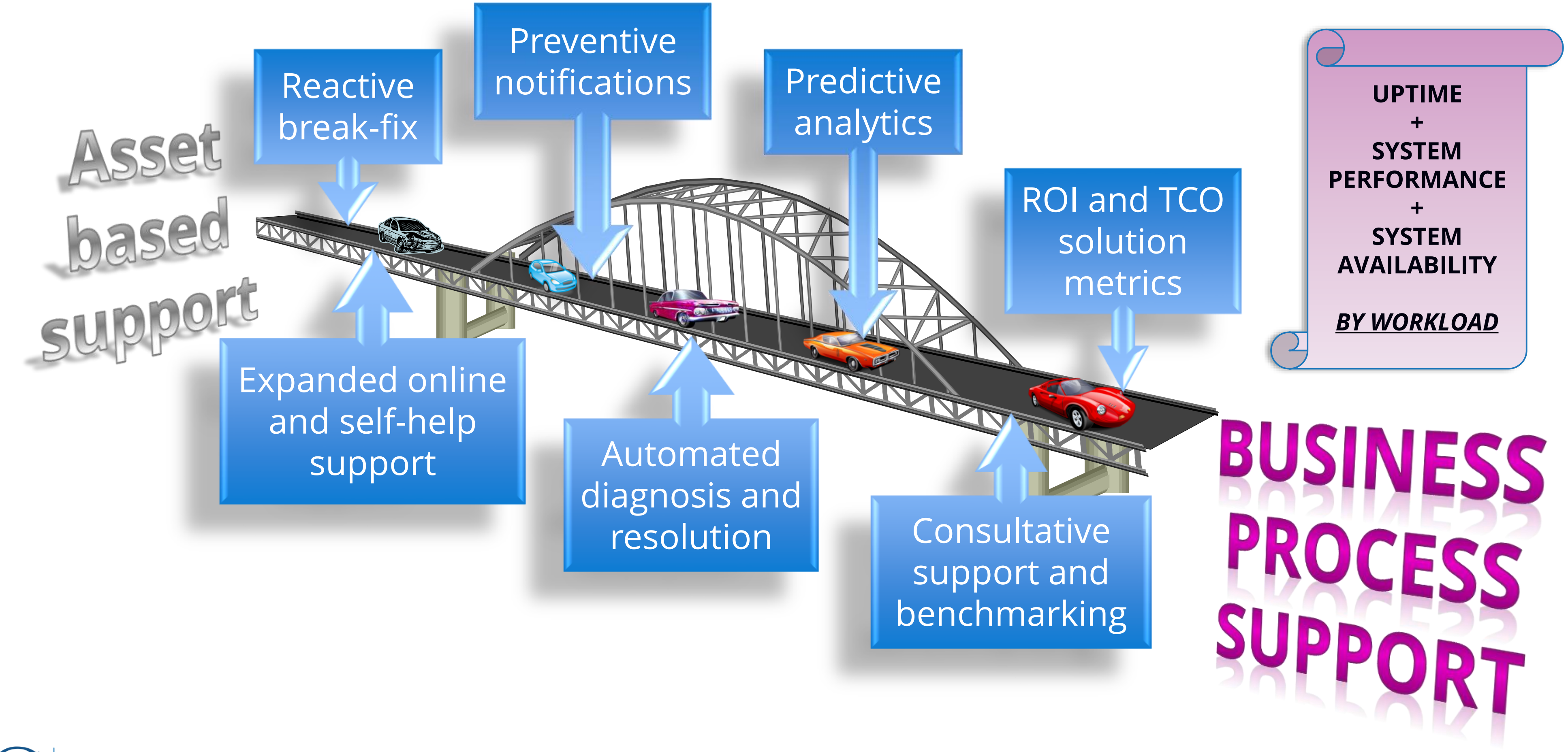
Helpdesk/Service Desk (same slide different result)

Person based support
Omnichannel
Feedback loops

Kiosking
Remote support tools
Inventory management

X-as-a-Service (ON-PREMISE)

Evolution of Support Services: Business Process Support



Key support market trends

CONNECTIVITY AND AUTOMATION

Market has finally reached a tipping point

- IoT and "software defined everything" is speeding up shift to smart automated and predictive support
- AR/VR technology is changing training, and what can be supported
- Part of significant shift away from reactive support to preventive and predictive support
- Hybird IT is creating complex IT environments that are too complicated for diagnosis/resolution by IT staff

DRIVE TO CUSTOMER VALUE

Definition is evolving as IT undergoes massive transformation

- Shift away from technology/asset support to business process support is underway, with focus on business outcome SLAs
- Achieving the desired business outcome is new critical support deliverable: Is the enterprise realizing the expected value? Does the software solve the problem it was intended to address?

CHALLENGE OF SUPPORT DELIVERY

Customer satisfaction/success remains elusive

- Customers often have to buy higher tiers of support from vendors to get the required level of support
- IDC research shows more hardware support providers including high-touch support programs (customer advocates), both paid and for free

EVOLUTION OF VENDOR SUPPORT

Advanced support technology is growing faster than ever

- Vendor support continues to focus on advanced support technologies to enable predictive/preventive support
- IDC expects vendor support will remain critical, especially for: access to latest upgrades and updates, deeper knowledge of the latest features and the software in general, and ability to provide advanced support

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Competitive Landscape

Dell EMC

- Clear Price
  - When purchase a two-tiered maintenance pricing structure for prepaid and renewal maintenance.
- Flexible Consumption Models for IT: Desktop to the Data Center
  - No up-front payments
  - No obligation after first 12 months of payments (i.e. return product with no termination fee)
  - Built-in price reductions every year that the offering stays in place; opportunity to reduce monthly payments by 30% the longer the offer stays in place
  - Enhanced channel partner incentives for Cloud Flex to expand market reach

HPE PointNext and GreenLake

- **Cloud-like abilities on-premises** - This is not just about automation and fast provisioning and scaling of resources, but the ability to produce an outcome for the customer. And this is no small feat—the solution must encompass not just the systems but the support, deployment, management, software and retirement. Just like we see in the public cloud.
- **Single point of contact for solution.** These consumption based models enable datacenter managers an easier and more efficient method to contact and work with the vendor, due to the vendors intimate knowledge of the systems they have put in place.
- **Data sovereignty** - Many countries and business regulations may prohibit data either leaving a country or a datacenter. This consumable model provides enterprises the same cloud abilities in their datacenter, as well as the ability to stay compliant.
- **Payment options and the possibility of using opex vs. capex** - By 2019, U.S. companies will adopt new FASB rules that will alter IT asset classifications for leased IT equipment. The new standard will change the classification to a capital expense instead of an operating expense, which previously was reported off the balance sheet. The new FASB rule is an effort to improve transparency, similarly to IFRS (rest of the world) standards.

Competitive Landscape

- Vendors still concerned with what TPM’s are doing
  - Market is flat, every penny and customer becomes critical
  - Pricing will continue to erode
  - Complexity will be introduced from a software perspective in to solutions
  - More As-a-Service consumption models will be developed
- Oracle – Need I say anymore..
- IBM acts like a TPM with 1.5b in MVS

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CIOs and IT managers:
Key concerns for 2018 (and beyond)

Managing migrations to enable digital transformation	Finalizing migration plans to enable digital business transformation while maintaining business processes
	Hybrid environments are complex, requiring skill to install, operate and optimize
	Support can be critical differentiator, with visibility into customer environment - but must be sensitive to timing of discussions
Maintaining legacy systems	Even organizations embracing innovation have extensive legacy infrastructure to support during migration – and who can best support them during the transition?
	Patch and upgrade management remains critical issue
	Cost management for legacy systems remains top of mind, as IT organizations look for funds that can enable innovation
Vendor management	Becoming more and more important with rise of cloud/as-a-service
	Technical account managers and single points of contact continue to rank highly in our surveys – improve L1/2/3 call process
	Integrated self-service support is key to optimize escalation process
Enabling advanced support features	Security and accessibility still hurdles for predictive/preventive remote support, but more importantly culture and technical expertise hinders the implementation
	White-glove treatment? Thing of the past? Make sure all engagement methods are utilize, with automation comes the lack of human intervention, this could lead to some disillusionments..

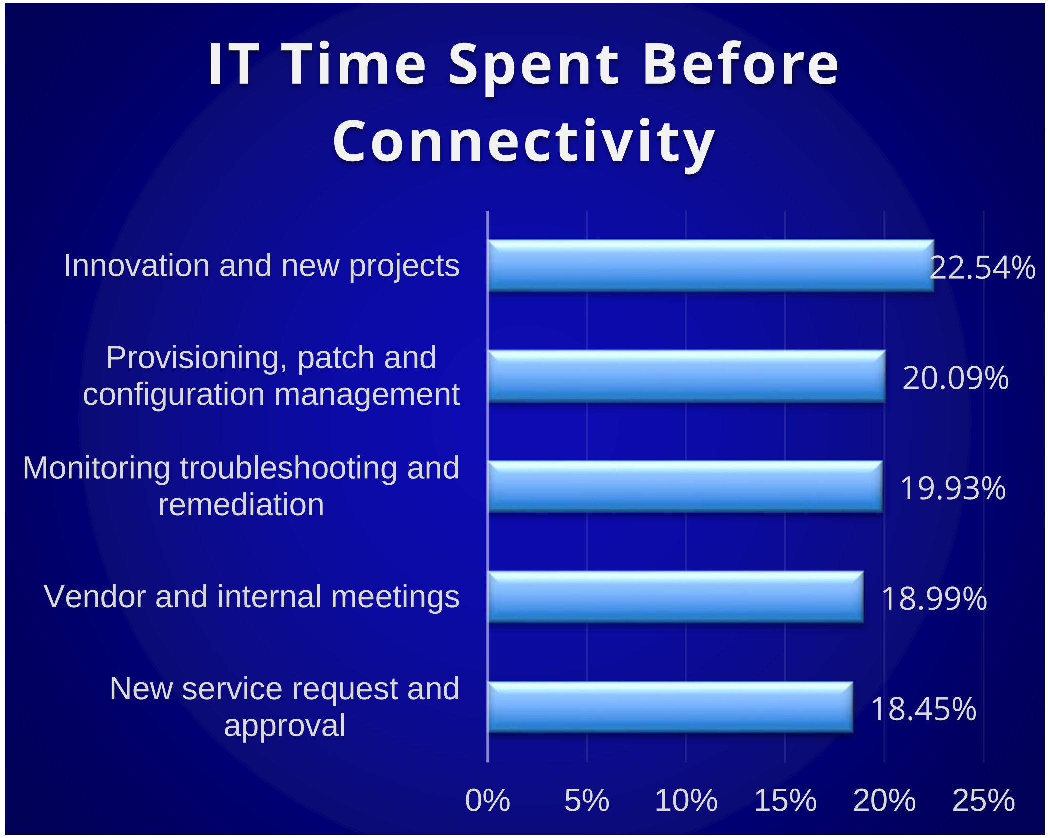
Buyer Perspective

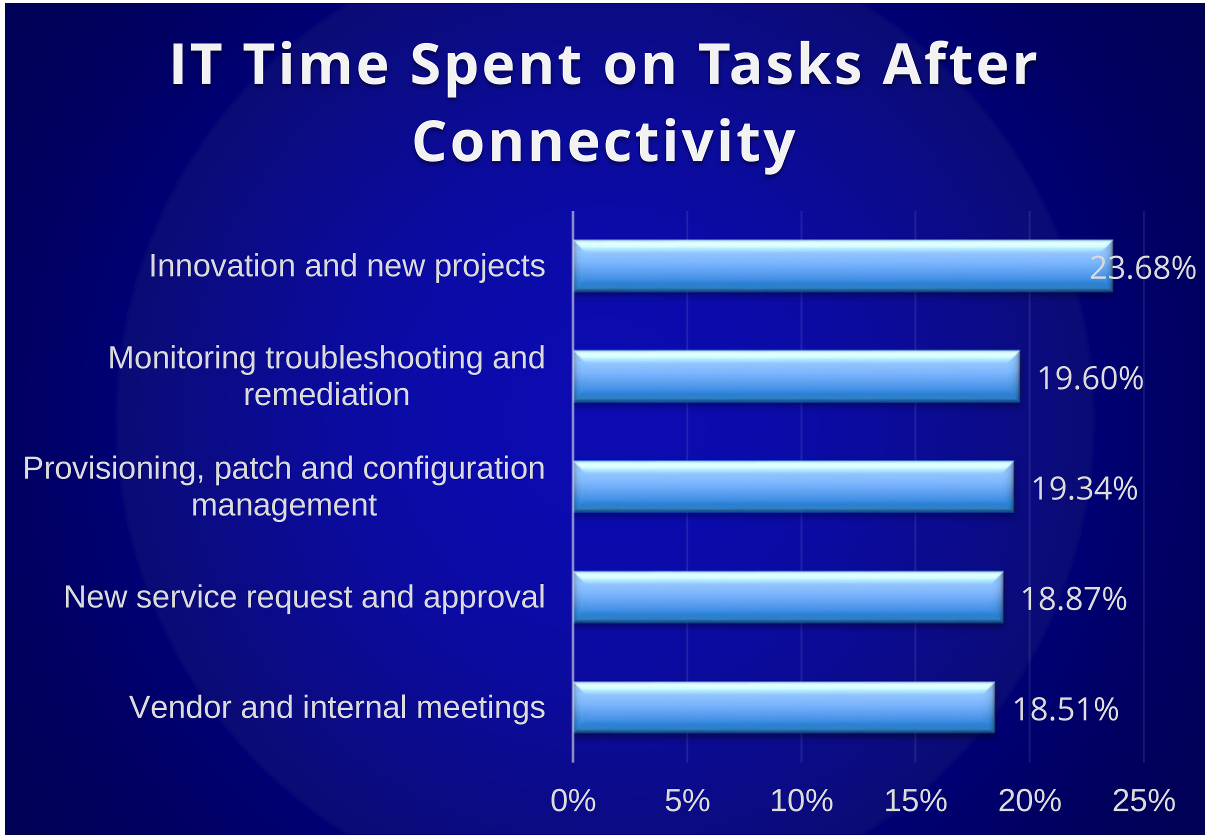
- Software support becoming more important than mediating the hardware issues, software-defined does a great job of computing through HW issues, #3 in key support attributes in a recent IDC survey

- Managing assets: customers want to know what they are paying for (support level, inventory lists, coverage, discounts)

- Enterprises feel IT is cost center not a profit center, turn that story around! Show how the internal datacenter can compete with the Azures of the world.

Connectivity Before and After: Yes the needle is moving!





Navigating the Edge

- Cloud is Going Local to Support IoT
- Define an edge strategy
  - Understanding performance/cost
  - Build, buy, or rent?
- Solve customer pain points
  - Fleet/Asset management
  - Governance
  - Financing
  - Security

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Future View of Market: Forecast Assumptions

- Both hardware and software support are closely tied to installed base for underlying technology
- Support market grows and contracts very slowly
  - Growth has slowed in HW support, due to consolidation and cloud
  - Third party support alternatives continue to be limited in software
- Support in cloud/as-a-service still evolving
  - “Included” nature of support in as-a-service inhibited growth
  - IDC expects sales to increase as customers need support to achieve widespread adoption/value realization
- Software defined infrastructures will force traditional vendors to re-evaluate support
- HW growth will be directly affected by % of enterprise applications will reside in public cloud or acquired through SAAS

WW Converged Systems Growth

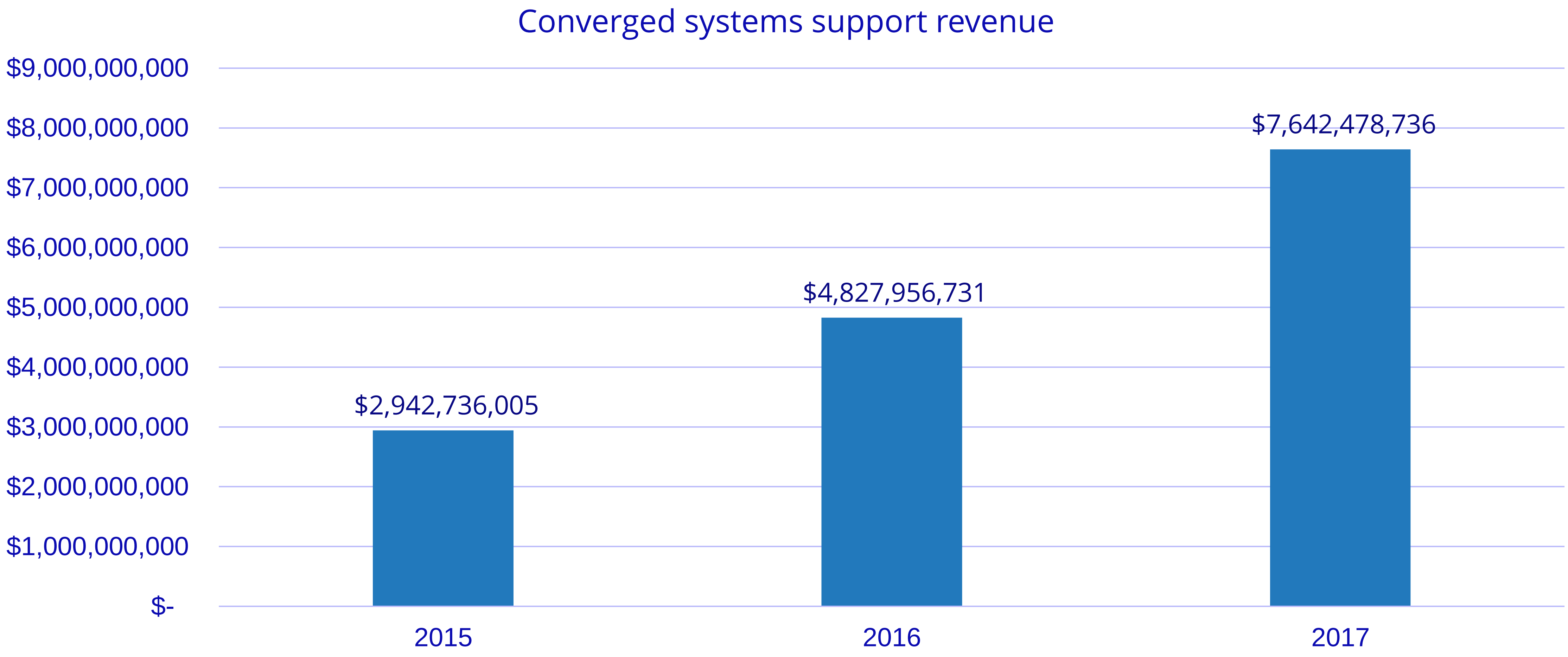
Revenue

Year	2012	2013	2014	2015	2016	2017	
Reference Systems	$2,309.25	$4,595.54	$6,752.24	$7,274.89	$6,837.78	$7,032.30	25%
Hyper-converged Systems			$416.78	$1,140.63	$2,408.96	$3,921.93	111%
Integrated Platforms	$3,315.25	$3,693.38	$3,957.43	$3,701.44	$3,466.43	$3,020.89	-2%
TOTAL	**$5,624.50**	**$8,288.92**	**$11,126.46**	**$12,116.96**	**$12,713.17**	**$13,975.12**	**20%**

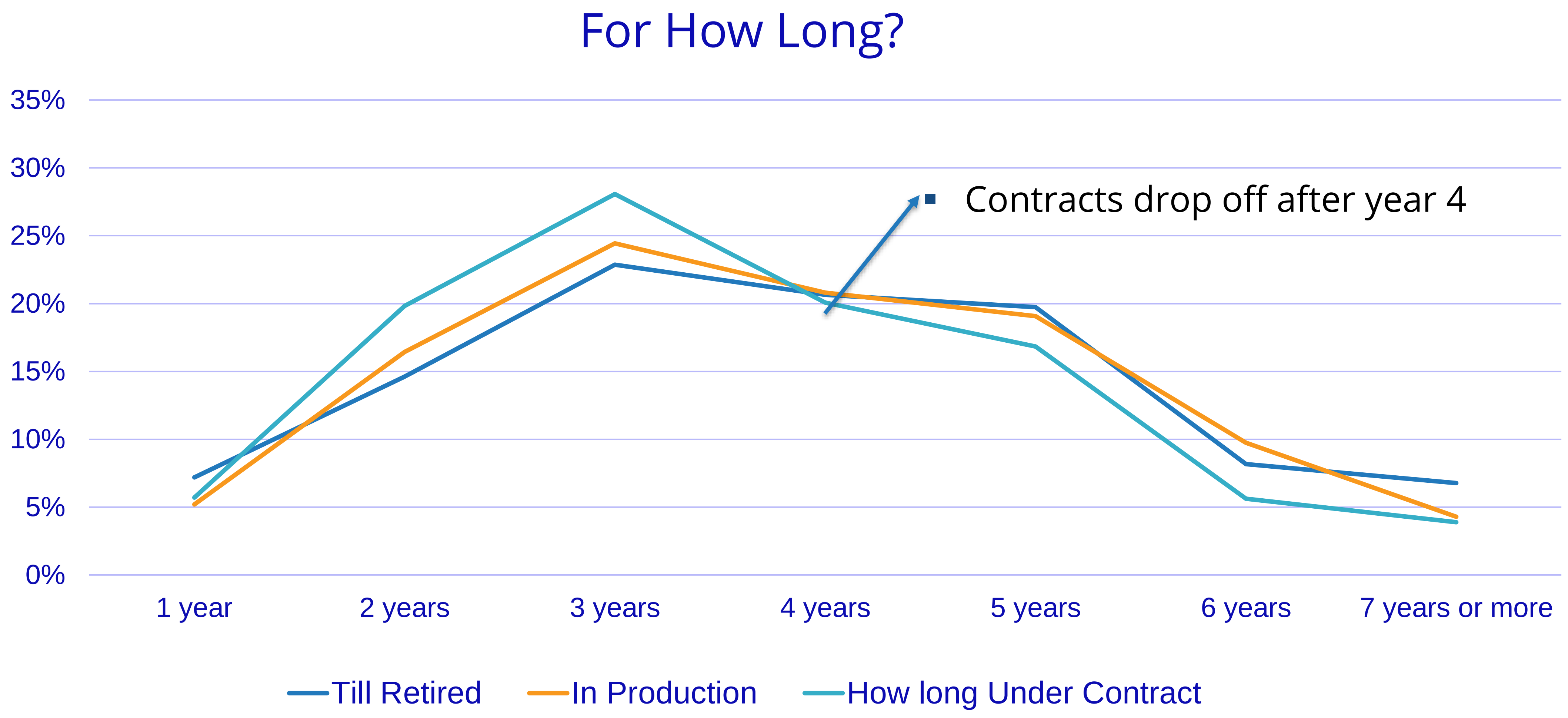
Units

Year	2012	2013	2014	2015	2016	2017	
Reference Systems	5,904	14,767	19,629	21,398	18,588	16,583	23%
Hyper-converged Systems			8,134	22,649	50,920	91,558	124%
Integrated Platforms	5,686	6,761	7,650	8,328	7,949	7,498	6%
TOTAL	**11,590**	**21,529**	**35,414**	**52,375**	**77,458**	**115,640**	**58%**

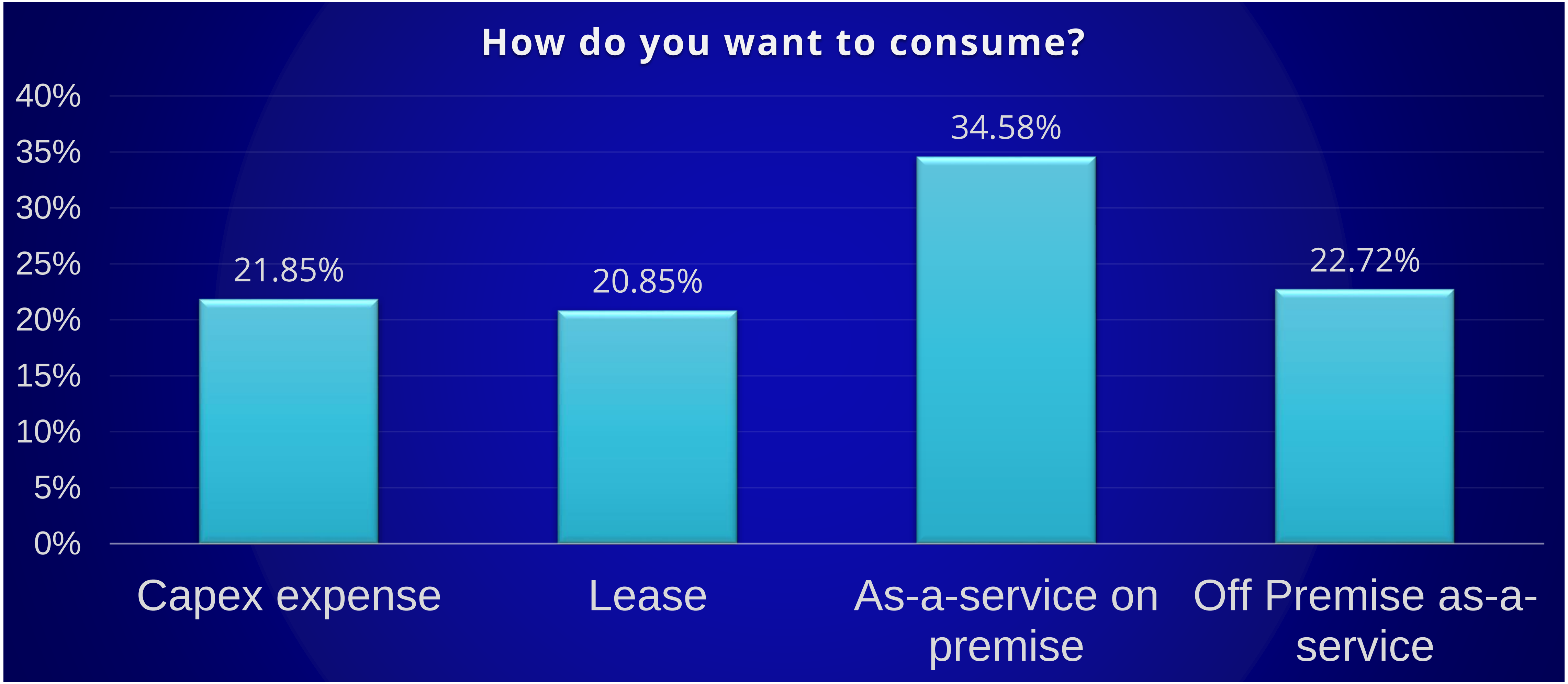
WW Converged Systems Support Revenue (annuity)



Hyper Duration: Production, Retire, Under Contract



Consuming Hyper/Converged Systems



US Hardware Support and Deployment Services Spending by Service Type, 2016-2021 ($M)

Table 2 Top Main

U.S. Hardware Support and Deployment Services Spending by Product Segment, 2016-2021 ($M)

	2016	2017	2018	2019	2020	2021	2016–2021 CAGR (%)
Client side	7,276.60	7,546.40	7,888.40	8,179.30	8,258.20	8,357.30	2.8
Networking	9,834.00	10,110.20	10,410.60	10,726.40	11,053.30	11,186.00	2.6
Servers	6,055.20	6,089.60	6,593.40	6,858.90	7,264.10	7,351.20	4
Storage	5,739.40	5,843.30	5,941.80	5,984.90	5,981.60	6,053.40	1.1
Total	28,905.10	29,589.50	30,834.20	31,749.50	32,557.20	32,947.90	2.7

Source: IDC, 2017

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Advice for the Technology Supplier

- Connectivity! Think efficiencies and proactive support. Connectivity and being more prescriptive in support satisfies all parties (enterprises, partners and vendors)

- Asset management, still a big deal, understand the datacenter through tools and automatic asset detection and you will provide that company with very important data. Overlay software interdependencies and now you have real stickiness.

- Software support continues to be more important as the “software-defined” world moves ahead
  - Portfolio, pricing and entitlement key to “Internet of Things” delivery
  - Patch and upgrade management best practices critical
  - End user adoption evolves over time with more automated/remote and “at-your-fingertips” support

Advice for the Technology Supplier

- As-A-Service as a service! Watch out for vendors packaging systems as a true service. That means they get to use the asset on a monthly basis (includes all support) then replace that asset as needed.

- Desk side services, service and help desk
  - Enterprises looking to deliver best practices for services
  - Willing to invest in customer experience to keep talent from leaving

- Look to develop edge solutions for support of “dark” spaces

- Consider programs and initiatives that help customers measure better business outcomes.
  - Program to help drive alignment between IT and business managers
  - Portfolio rationalization to integrate IT assets with business processes

Advice for the Technology Supplier

- Plan for expanded automated operational support, especially around critical decision points for infrastructure/app management
  - Opt-out is key for widespread adoption
  - Any plans to retrofit into existing deployments require a high-touch approach

- Get the engineers involved! They have lots of information about a customers environment. (Tap That Knowledge)

- Invest in solutions that will create operational efficiencies with a personal touch, connect systems, asset management, augment capabilities and MV contract support to name a few..

For More Information

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