



HCL TECHNOLOGIES PRESENTS

THE 21ST CENTURY DATA CENTER BLUEPRINT

ROADMAP FOR DATA CENTER TRANSFORMATION



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21ST CENTURY IMPACT ON DATA CENTERS

The rising wave of digitalization has changed the way IT impacts business. Companies like Uber, Airbnb, Alibaba, operate at the customer interface layer and have redefined the user experience, enabling them to command huge premiums over traditional players.

The role of IT is therefore now fast changing from managing assets and services to delivering perfected user experiences. This change has been further accelerated as a result of businesses seeking IT solutions that are on-demand and are easily accessible from a standard catalog.

The 21st Century Data Center must thus accommodate the following key shifts to deliver better, faster and more predictable experiences:

- 1. Data centers configured to a services model rather the traditional Hardware-Software set-up
- 2. Services increasingly consumed by not just enterprise users but also external partners, triggering the need for development of a federated DC services model
- 3. Enterprise IT becoming a service aggregator and orchestrator of business services as a result of this integration
- 4. Autonomics and A.I.-driven automation along with Orchestration becoming the most-used tools as Enterprise IT will focus on delivering on business needs as per requirement: experience, speed & agility or efficiency
- 5. Limited usage of dedicated single tenant data centers. Increasing adoption of utility model allowing enterprises to scale according to business cycles
- 6. Service Integration and Management becoming the central nervous system allowing IT to onboard and manage multiple providers and orchestrate business outcomes
- 7. Higher focus on the abstraction of underlying platform and infrastructure layers of the data center to get better and consistent experience while not comprising faster execution.

DESIGNING THE NEXT GENERATION DATA CENTER

The Data Center is the power source behind almost every business initiative, whether it is running business processes or digital experience platforms for customers. In the 21st Century Enterprise, the way Data Centers are designed and operated have evolved significantly to meet elevated business expectations of speed, agility, experience and efficiency.



DryiCE, HCL's Autonomics and Orchestration framework, is a core component that ties together all critical Data Center related operations and processes. With a simple yet powerful vision of "what can be automated will be automated," more than 25 DryiCE components work together to simplify complex Data Center operations. With more and more components of the 21CE DC being software-defined, automation becomes all the more effective in eliminating common support and maintenance tasks, and applying preventive levers to reduce incident levels.

TECHNOLOGY AND OPERATIONS: INSIDE 21ST CENTURY DATA CENTER DEPLOYMENTS

TECHNOLOGY

After having optimized the underlying hardware with consolidation and virtualization, we believe that enterprise platforms provide the next big opportunity to drive agility, standardization and cost optimization within enterprise IT. On the cloud, we expect customers on cloud to continue with their "public cloud first" policy. Applications that are native to the cloud will perform better than those that migrated, and a utility model built on mature SDI stacks will be adopted for workloads that are unable to be moved to cloud.

OPERATIONS

A multi-modal operating model is essential since elements within an enterprise's IT network have specific requirements and operate at different speeds. The approach for operating the multi-modal IT environments must:

- 1. Focus on cost and stability through automation and orchestration.
- 2. Drive agility and scalability with automation & orchestration.
- 3. Encourage use of common tools & frameworks but customized to each mode of IT

CASE STUDY: LEADING GLOBAL FINANCIAL ORGANIZATION

OBJECTIVE

Transition to a more service-based approach to infrastructure with an emphasis on self-service and centralized management.

SOLUTION

An automated, cost-effective open stack Software Defined Infrastructure deployment with integrated cloud orchestration and Remedy environment for Unified Service Management.

BENEFITS

- 1. High level of automation resulting in 30% cost reduction and 25% reduction in manual effort
- 2. A roadmap for migrating legacy applications to cloud-native applications for increased resiliency.

HCL'S 21ST CENTURY DATA CENTER BLUEPRINT: TRANSITIONING TO THE NEXT GENERATION DATA CENTER

The data center is at the heart of every business initiative, whether running a digital experience platform or operating business processes. In 21st Century Enterprises, the data center has to be designed and operated such that businesses' expectations of speed, agility, experience and efficiency are met consistently.

HCL has flipped the traditional view of data center services on its head by putting consumers of data center services at the forefront of its transformation story rather than operating from a traditional bottoms-up approach that focuses on the underlying technology stack.

There is today higher focus on the software layers of a data center as a result of more intelligence, logic and functionality being inbuilt in them, causing the hardware part to become largely commoditized. Cloud Computing is a key example of how today software is driving infrastructure.

Enterprises are increasingly looking at making the shift to a cloud-centric architecture given the business benefits, namely:

- 1. Reduction of TCO, as expensive hardware is no longer required to be bought and maintained
- 2. Increase in the extent of automation of business processes
- 3. Simplified operations through automation and orchestration
- 4. Higher use of autonomics (Machine Learning and A.I.) increasing the adoption of self-service and self-healing processes
- 5. Easier and faster access to Infrastructure by business users
- 6. Easier Integration with third-party services for orchestration across boundaries
- 7. Native support for modern, stateless and web-based applications
- 8. Increased choice in vendors and providers for applications, compute, storage etc

NEXT GENERATION DATA CENTERS ARE FOCUSED ON OUTCOMES AND EXPERIENCE: HCL'S SOLUTION

HCL's 21st Century Blueprint allows IT to focus on how their consumers use available IT resources to achieve desired business outcomes. This model redefines traditional Data Center architectures in the following ways:

- 1. Pivots the design of the data center around user workloads and software-defined centricity
- 2. Enables appropriate access levers for different consumers depending on requirements
- 3. Generates workload templates to simplify provisioning for different users
- 4. Adopts platform-centric approach, integrating Infrastructure into the platforms supporting business applications and services
- 5. Identifies the right mix of Physical, Virtual (private) and Cloud (public) RUs at the foundation and Infrastructure layers to achieve efficiency, availability manageability, performance and security goals thereby creating an effective Hybrid environment
- 6. Brings integrated automation and orchestration as unified operations for application across IT network

WHY SHOULD YOU CHOOSE HCL AS YOUR NEXT GENERATION IT PARTNER?

HCL's industry-leading Infrastructure Services Division has the experience, talent and tools to help you create, run and manage next generation IT Infrastructure. As part of our 21st Century Enterprise Data Center offering, we bring best-of-breed solutions and proven experience of transitioning customers to Next Generation IT Services.

A typical engagement, driven by our experienced Cloud consultants who bring with them combined knowledge of more than fifty such engagements with Fortune 500/G1000 customers, will involve:

- A 4-6 week Cloud Assessment and Readiness Exercise using our proprietary tool CART 2.0
- Development of a consultative roadmap and blueprint which will deliver a tailor-made comprehensive solution for your business needs

Our demonstrated track record in executing large-scale, complex IT requirements across core IT infrastructure towers in combination with our extensive investments in IP and industry-leading innovations makes us uniquely positioned to be your ideal partner for transformational projects.

HCL has a range of comprehensive services that can help you achieve your 21st century goals. Talk to us to get started.

HOW MAY WE ASSIST YOUR TRANSFORMATION?

Email: contact.infra@hcl.com or call 1-877-243-6624 to speak with an expert.



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