Digital Workspace (DWS) NxT

Next Generation Digital Workspace – The Future of End User Computing
The HCI Group & Tech Mahindra

The HCI Group & Tech Mahindra are committed to improving healthcare in the NHS through a combination of disruptive innovation and cost reduction. HCI & Tech Mahindra offer a broad scope of healthcare IT solutions in more than 15 countries in North America, Europe, Middle East and Asia Pacific.

This broad scope enables us to share with the UK’s Global Digital Exemplars and Fast Followers our learning and experience of working with some of the most digitally mature healthcare organisations internationally.

<table>
<thead>
<tr>
<th>EPR Services</th>
<th>IT Managed Services</th>
<th>Additional Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Selection Advisory</td>
<td>Infrastructure Management Services</td>
<td>Cyber Security</td>
</tr>
<tr>
<td>Legacy System Support</td>
<td>Application and Infrastructure Analytics &amp; Visualisation</td>
<td>HIMSS EMRAM Consulting</td>
</tr>
<tr>
<td>Data Migration</td>
<td>Digital Workspace</td>
<td>EPR Implementation &amp; Support</td>
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<tr>
<td>Integration &amp; Testing</td>
<td>Network Services</td>
<td>Healthcare IT PMO</td>
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<tr>
<td>Implementation</td>
<td>Data Center Services</td>
<td>Population Health</td>
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<tr>
<td>Training</td>
<td>Cloud Migration Services</td>
<td>Automation &amp; AI</td>
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<tr>
<td>Go-Live Support</td>
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<td>Staff Augmentation</td>
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<td>Optimisation</td>
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<td>Clinical Service Desk</td>
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<td>Staff Augmentation</td>
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Tech Mahindra in UK

Moving forward with existing relationships

- Total 2,000 associates based in UK
- Engagements with top Telco providers in UK
- 3 Development Centers and Branch office in UK

• Over 100 dedicated staff
• Experience spanning most vertical sectors
• Ranked in the Top 3 for Creativity in Econsultancy’s 2017 digital agency survey

TECH MAHINDRA & BT RELATIONSHIP: 30 YEARS

- Launch of BT cloud propositions and DevOps adoption across the entire IT estate
- We maintain BT.com (www.bt.com), one of the largest online websites in the world
- ICMG Enterprise and IT Architecture excellence award

Consistent award winner in categories from:
• Production to Concept Cars
• H2 SPEED
• International Architecture Award 2016 assigned to the Istanbul New Airport Air Traffic Control Tower

• 50+ Financial Services Clients
• 18 million Accounts
• £24 billion assets administered on our systems
• £15 billion assets directly serviced by Target
Current Challenges And Demand In Healthcare

REFORM & SECURITY

*In line with recent reviews such as Wachter and Carter, Security (CareCERT) and Compliance Audits.*

AGILITY & EFFICIENCY

*Trust mergers, new facility build out, new partnerships & affiliations (Integrated Care Organisations), IT simplification, reduction in readmissions.*

WORKFORCE & PATIENTS

*New flexible work options, training, virtual visits, mobilising workflows, wellness programs, patient portals.*

How do you address these challenges and demands for your organisation to mobilise?
Digital Workspace (DWS) NxT

Your Path to Mobilising Healthcare
Not just VDI or DaaS, but an “End to End Digital Workspace Platform”

Digital Workspace NxT includes all components to deliver an efficient Digital Workspace

Whether you need an app or secure browser, or a full Desktop

End Points

Platform Hardware

Software Licenses

24x7 Support

Apps

Secure Browsers

Virtual PC

Data on-the-go

Enterprise Mobility

Virtual Workstation

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That Delivers a Secure Workspace at your Fingertips

- Dictation Software
- Secure Messaging
- Electronic Patient Record
- Image Viewer
- Video Conferencing
Meeting the Demands of an Ever Changing Market

<table>
<thead>
<tr>
<th>SECURING WORKSPACE</th>
<th>BUSINESS AGILITY</th>
<th>DIGITAL TRANSFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractors / Offshore Users</td>
<td>Mergers and Acquisition</td>
<td>Secure Office 365 Adoption</td>
</tr>
<tr>
<td>Remote and Tele Workers</td>
<td>B.O. Infrastructure Consolidation</td>
<td>Hybrid Cloud Adoption</td>
</tr>
<tr>
<td>Transforming Call Centers</td>
<td>HW Refresh &amp; Win 10 Upgrades</td>
<td>Secure Web Apps (Legacy apps)</td>
</tr>
</tbody>
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Without the Traditional Overheads

- Overheads in reactive support
- Device, OS and Application Upgrades
- Windows & Antivirus Updates
- Application & Data Security overheads
- Business Continuity & Built-in Disaster Recovery
- Complex Internal VDI Design & Support

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Digital Workspace NxT – Features & Solution Highlights

<table>
<thead>
<tr>
<th>IT STORE &amp; AUTOMATION</th>
<th>NEXT-GEN APPLICATION DELIVERY</th>
<th>PRESCRITIVE ANALYTICS</th>
<th>ENHANCED SECURITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>USER ON-BOARDING ONBOARD USERS IN HOURS</td>
<td>SELF SERVICE APP PROVISION USER DRIVEN SELF SERVICE</td>
<td>PROACTIVE MONITORING SOLVE ISSUES BEFORE IMPACTING USERS</td>
<td>CONTEXT AWARE SECURITY CONTEXT BASED POLICY ENGINE</td>
</tr>
<tr>
<td>LICENSE MANAGEMENT LEASE</td>
<td>AUTO REMOVAL</td>
<td>CONCURRENT</td>
<td>SPEED TO VALUE REDUCE PACKAGING DELAYS</td>
</tr>
<tr>
<td>SELF SERVICE IT STORE REDUCE SERVICE DESK CALLS</td>
<td>APPLICATION LAYERING NO PACKAGING / STREAMING / INSTALL</td>
<td>COMPLETE VISIBILITY END TO END MONITORING</td>
<td>PREVENTION OF ZERO DAY ATTACKS</td>
</tr>
<tr>
<td>RUNBOOK AUTOMATION AUTOMATE KNOWN TASKS</td>
<td>INSTANT DELIVERY DELIVER APPS TO 1000s OF USERS INSTANTLY</td>
<td>UNDERSTAND THE IMPACTS OF CHANGE CORRELATE SESSION AND PERFORMANCE</td>
<td>COMPLETE CONTROL AND VISIBILITY USAGE &amp; INCIDENT REPORTING</td>
</tr>
<tr>
<td>PASSWORD RESETS SELF SERVICE SECURE PASSWORD RESET</td>
<td>BETTER LICENCE CONTROL MAINTAIN BETTER LICENCE</td>
<td>USABILITY KPI MEASURE SLA IN USABILITY</td>
<td>READ ONLY BLANKETING ENHANCED CONTROL OF EXECUTABLES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>50%</th>
<th>100%</th>
<th>100%</th>
<th>40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCREASE IN PRODUCTIVITY</td>
<td>AGILITY &amp; FLEXIBILITY</td>
<td>SECURED &amp; CENTRALISED DATA</td>
<td>CALL REDUCTION</td>
</tr>
</tbody>
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# Digital Workspace NxT – Persona Aware Approach

## Autonomy | Business Process | Mobility | Collaboration

<table>
<thead>
<tr>
<th>USER ASSESSMENT</th>
<th>DEFINE JOB ROLES</th>
<th>MAP TO TEMPLATES</th>
<th>BUILD PROFILES</th>
<th>DEVELOP PERSONAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>SYSTEM ASSESSMENT</th>
<th>DEPLOY ASSESSMENT AGENTS</th>
<th>APPS &amp; PERFORMANCE DATA</th>
<th>DATA CENTER AND HOSTING ASSESSMENTS</th>
<th>DEVELOP PLATFORM DESIGN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
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</tbody>
</table>

## Results
- User Personas
- Workspace Model & Sizing
- Applications Landscape
- Platform Design
- On Boarding Road Map
### Healthcare User Personas – Illustrative

#### A- The Executive

**EXECUTIVES MANAGERS**

- **Device**: Multiple
- **Application**: Office Productivity, Browsers Messaging
- **Network Utilisation per user**: 40-45 Kbps
- **Profile**: Windows Roaming
- **Mobility**: Medium

#### B- The Task User

**NURSES AND ALLIED HEALTH PROFESSIONALS**

- **Device**: Multiple
- **Application**: EPR, Browsers Electronic Staff Roster
- **Network Utilisation per user**: 50 - 60 Kbps
- **Profile**: Windows Roaming
- **Mobility**: Low

#### C- The Mobile User

**MEDICAL STAFF**

- **Device**: Desktops, Laptops, iPad
- **Application**: EPR, Office Productivity, Digital Dictation
- **Network Utilisation per user**: 50 - 60 Kbps
- **Profile**: Windows Roaming
- **Mobility**: Medium

#### D – Support Services

**SUPPORT STAFF**

- **Device**: Desktops, Laptops
- **Application**: Office Productivity, Admin Tools, Messaging
- **Network Utilisation per user**: 30 -60 Kbps
- **Profile**: Windows Roaming
- **Mobility**: Medium

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*Supports dual roles – cross organisational working*

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## DWS NxT – Savings Overview (Illustrative)

<table>
<thead>
<tr>
<th>Component</th>
<th>Savings Overview</th>
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<tbody>
<tr>
<td><strong>Hardware</strong></td>
<td></td>
</tr>
<tr>
<td>15 - 20%</td>
<td>Delayed hardware refresh – Refurbished Desktops</td>
</tr>
<tr>
<td>20-25%</td>
<td>Replace Desktops with Thin Clients / Zero Clients</td>
</tr>
<tr>
<td>40-45%</td>
<td>Planned for optimal capacity – no hardware spillage</td>
</tr>
<tr>
<td><strong>Software</strong></td>
<td></td>
</tr>
<tr>
<td>20-25%</td>
<td>Optimisation of licensing pool for off the shelf Applications</td>
</tr>
<tr>
<td>40-45%</td>
<td>Standardised licence management with internal chargeback</td>
</tr>
<tr>
<td><strong>Services</strong></td>
<td></td>
</tr>
<tr>
<td>40 – 45 %</td>
<td>70% reduced fleet for Deskside Support</td>
</tr>
<tr>
<td></td>
<td>40% reduced fleet for L2 and L3 Desktop Management</td>
</tr>
<tr>
<td></td>
<td>40-50% reduction in Service Desk Tickets</td>
</tr>
<tr>
<td></td>
<td>50% reduction in Application Packaging cost through use of Application Layering</td>
</tr>
<tr>
<td><strong>Overall Direct Savings</strong></td>
<td></td>
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<tr>
<td><strong>Power and Infrastructure Cost</strong></td>
<td></td>
</tr>
<tr>
<td>60-70%</td>
<td>80% reduction in deskside power consumption</td>
</tr>
<tr>
<td></td>
<td>40% savings in infrastructure and utilities foot print</td>
</tr>
</tbody>
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Source: Industry Analysts and Tech Mahindra Biz Case exercises for mid and large size Enterprises

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Digital workspace NxT – Case Study (US Healthcare 50K Seats)

The Client

Fortune 100 Healthcare giant, headquartered in U.S. with a galactic size of over 60K globally diversified employees and revenue of USD 35 bn. The company works in traditional and consumer directed health care insurance plans and related services.

Business Challenges

• No PLM for Windows 7 migration and app virtualisation projects
• VMware VDI base of 15,000 users, unable to scale up to 50,000 user base
• Acquisition of company with an employee base of 11,000
• Increasing TCO/ROI in end user IT spend

Solution Approach

• Structured Infra assessment and discovery phase followed by a POC
• Developed a hybrid IaaS + SaaS solution and made the transition from traditional virtualised desktops
• Existing VDI to next generation DaaS 50,000 VMs
• On premise Customer (US) DC in a multi-site deployment
• Developer ready Workspace
• Gradual user migration and Windows 10 Ready

Benefits

• TCO benefits year-on-year on account of lower upfront capex for infrastructure
• Significant savings in support cost and through higher rationalisation of datacenter resources
• 99.95% availability and a RTO of 20-60 minutes
• Enabling the company to integrate its business processes across multiple sites and lines of business at once with a newly acquired company

Scale of Operations

• Over 60,000 employees in more than 40 countries
• 47% of employees are teleworkers
• 36,000 of users to scale up to 50,000
• Single corporate Window 7 image
• 24x7 DC support
• Compliance: HIPAA Standards

Solution Stack

• Compute - Cisco
• Storage - Nimble
• Network - Cisco Nexus 5K Series
• Infrastructure Virtualisation - MS Hyper-V
• Infrastructure Cloud Management- SCVMM, SCDPM
• Infrastructure Monitoring - SCOM
• Desktop Brokering - Citrix Xen Desktop 7.x
Next Steps…

- Digital Workspace - Brief questionnaire and initial workshop
- Interested in learning more about other HCI/Tech Mahindra Services
- Webinars & Blogs
- www.thehcigroup.co.uk

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