BUILDING THE 21ST CENTURY ENTERPRISE

By Sukamal Banerjee, Global Head of IoT WoRKS
FROM FUNCTIONAL SILOS TO BUSINESS VALUE CHAIN, ENABLED BY TECHNOLOGY

BUSINESS VALUE CHAIN

ASSET VALUE CHAIN

SERVICE VALUE CHAIN

USER VALUE CHAIN

IoT

NEXT GEN IT

DIGITALIZATION
MAKING THE IoT JOURNEY REAL WITH IoT WO RK S

For a fortune 200 global engineering conglomerate

**Impact**
- New revenue stream - multi billion dollar potential
- 15% reduction in support cost

**Scale & Enabler**
- 1Mn+ devices across 18,000+ customers
- IoT solution – ownership of platform

For a global ‘Stolen Vehicle Recovery’ firm

**Impact**
- Business transformation to counter competitive threat from automobile OEMs by moving into enterprise & consumer wearable markets

**Scale & Enabler**
- Increasing customer base from 75k to 400k in 3 years
- Enabling migration from legacy to a new scalable IoT platform

For a leading multinational medical devices company

**Impact**
- Working capital reduction for inventory requirements by nearly $400 Mn
- Smart fulfilment to enhance end user satisfaction

**Scale & Enabler**
- 25 K diverse surgical kits impacted across locations
- Sensors that can withstand 400 degree Celsius temperature while sterilizing

For a fortune 500 global office automation player

**Impact**
- $1 Bn worth of business model for consumable replenishment
- $120 M revenue achievement

**Scale & Enabler**
- Platform connects 15 K devices, 10 K customers & 450 partners
- Leverage of PAS & IoT solution accelerators
EVOLUTION FROM SMART PRODUCTS & SERVICES TO IoT

**Leveraging the Core Business**
- **Domain expertise**
  - $170 Mn+ worth Smart Device Development
  - Deep understanding of Products in 9 Verticals
- **Leadership in Infrastructure Services**, delivering at global scale with strong Cloud & Security Capabilities
- **4000+ member practice** driving leadership in BI & Analytics Infrastructure
- **Labs & Infrastructure**
  - 80+ customer specific innovation labs across the globe
  - Tooling investments in large scale infrastructure deployment

**Investing for the New**
- **FAST solution**
  - Four solution categories for focused investment:
    - Force
    - Asset
    - Site
    - Transform
- **IoT Data Science CoE for transformation**
  - Data Science CoE – Redmond, WA USA
  - Leading Professionals, Labs & Infrastructure
- **Leveraging IP’s being developed**
  - ERS IP’s developed: Pangea, IDEA
  - Industrial gateway solution
  - Adoption of PAS to IoT
  - DryIce Automation Framework to drive IT/OT

**Driving Offering Maturity & Partnerships**
- **Investments: Tools, demos, PoCs**
  - Value Analysis Tool
  - IoT Maturity Assessment Framework
  - Accelerator factory for Customer PoC’s
  - Solution Maturity being driven by intense focus on 4 chosen verticals
- **Solution Maturity through intense focus on 4 Verticals:**
  - Mfg.
  - Healthcare
  - Energy & Utility
  - Transportation & Logistics
- **In Depth Partnership Establishment**
  - Key technology and niche solution players for running large scale IT/OT systems
**IoT ACROSS GLOBAL INDUSTRIES HAS CLEAR IMPACT AREAS, HENCE ACCELERATING ADOPTION**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Impact Description</th>
<th>Statistics</th>
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<tbody>
<tr>
<td><strong>From break fix to predictive operations</strong></td>
<td><strong>Manufacturing</strong>&lt;br&gt;75% of U.S. plants more than 20 years old. Aging assets costing approx. $20 bn in unplanned downtime</td>
<td><strong>$31 Mln per day</strong> Production downtime costing Automobile manufacturing</td>
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<td><strong>28.5%</strong>&lt;br&gt;Avg. Increase manufacturers utilizing IoT solutions saw in revenue between 2013-14</td>
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<td><strong>From reactive action to smart demand response</strong></td>
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<td><strong>From high cost interaction to remote monitoring</strong></td>
<td><strong>Healthcare</strong>&lt;br&gt;$300+ bn healthcare system savings by widespread use of digital therapies</td>
<td><strong>$12 Mln per day</strong> Cost to a Pharma Company for a single drug in the FDA approval process</td>
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<td><strong>$17.5 bn</strong> Preventable readmissions costing the health care system</td>
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<td><strong>From expensive operations cost to predictive &amp; lean operations</strong></td>
<td><strong>Energy &amp; Utilities</strong>&lt;br&gt;$18 bn The impact of Grid outages between 2003-2012</td>
<td><strong>$40 bn</strong> Every year, the US loses in water, electricity transmission, and distribution and natural gas due to aging infrastructure</td>
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<td><strong>$300,000 per day</strong> Each pump failure costing in lost production</td>
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<td><strong>Transportation &amp; Logistics</strong></td>
<td><strong>~4%</strong>&lt;br&gt;Paper thin margins for freight forwarders in a shrinking market</td>
<td><strong>946 cargo theft incidents</strong> across US and <strong>689</strong> in Europe, recorded by Freight watch</td>
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HENCE, THE MARKET POTENTIAL FOR HCL

GE estimates that “Industrial Internet” has the potential to add $10 to $15 trillion to the global GDP over the next 20 years.

IoT economic value add of $1.9 T by 2022, 80% of supplier revenue will be derived from services.

**Industrial and Manufacturing**
$36 Bn

**HealthCare**
$36 Bn

**Transportation**
$14.4 Bn

**Energy & Utilities**
$12 Bn

310 B incremental revenue opportunity in 2020 for IoT products & services suppliers

*source: Gartner*

Relative potential of revenues from service segments over lifecycle of a typical IoT project*

**Define:** ~5-10%

**Build:** ~35-40%

**Run:** ~45-50%**

(inc. cloud services)

3rd party licenses: ~5-10%

(*sample size of HCL projects)

F500 Typical Budget:

Corporate Program Spend:
$ 500 M [3-5 yr]

BU Level Program Spend:
$ 50 M [~3 yr]

Pdt / Function Level Spend:
$ 7 – 10 M [~3yr]

(*source: Forrester/Gartner)
THERE CLEARLY ARE CHALLENGES TO ADOPTION

Please rank the three greatest barriers to the success of your organisation's IoT activity

Currently use IoT (n=116)  
Plan to implement next 12 months/future (n=147)

Unclear business benefits  |  50%  |
Insufficient expertise/staffing  |  40%  |
No clear leadership for IoT  |  10%  |

Security concerns  |  15-20%  |
Insufficient time to develop ideas to benefit from IoT  |  25-35%  |
Technology is immature  |  20-25%  |
Privacy (e.g. of customer data) concerns  |  5-10%  |
Resistance to change in the organization  |  15-20%  |
Regulatory issues/Concerns  |  25-35%  |
Concern about potential liabilities  |  20-25%  |
Others  |  5-10%  |
OFFERINGS ALIGNED TO THE MARKET NEEDS

Plan a customized IoT Program
- IoT Strategy & business case
- Industry insights & benchmark
- Outcome based IoT Roadmap
- POC & Technology roadmap
- User-centric business process transformation plan

Implement IoT program
- Asset IoTization
- Platform Development
- Analytics & Datascience
- Application Integration

Realize value - IT/OT support & analytics
- IoT Platform Management
- Orchestrate & manage IT/OT convergence
- Insight-as-a-Service
- Uptime Assurance
KEY IS TO CREATE TRANSFORMATIVE IMPACT

Connect Things, to generate new Data

IoT begins with Things

Analyse Data, generate insights, orchestrate Things, to Optimize Process

Optimize Process, to change People behaviour, improving productivity and delivering greater value
MAKING THIS IOT TRANSFORMATION REAL

Surgical Kits Track and Trace

- **THINGS**
  - Select and light up dark assets

- **DATA**
  - Determine data to be generated

- **PROCESS**
  - Collect / analyze data to generate information / insights

- **PEOPLE**
  - Change processes to take action on insights

- **Sales Rep**
  - SCM

**Surgical Kits**

- What is it?: ID, Parts,
- Where is it?: Location
- How is it?: Temperature, Sterilization status

- From manual to automation: Is the right kind of surgical kit available with all parts at a right place and right time?
- Sales manager have clear view of the inventory
- Operations manager has clear view on the demand and inventory
MAKING THIS IOT TRANSFORMATION REAL

Predictive maintenance for aircraft engine

THINGS
Select and light up dark assets

DATA
Determine data to be generated

PROCESS
Collect / analyze data to generate information / insights

PEOPLE
Change processes to take action on insights

- Aircraft engines
  - What is it?: ID, spare-parts, maintenance history
  - Where is it?: Location
  - How is it?: Vibration, Temperature

- Analyze data to answer: When and where is it going to need maintenance?
- Generate info to answer: what is needed to do the maintenance?
- Don’t wait till engine fails, and scramble parts and people to diagnose and fix
- Optimize MRO process to orchestrate right spare-parts, skillsets at right place

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WE ARE DRIVING IOT WORKS WITH HOLISTIC GTM STRATEGY

Productized Offering
- Define, Build, Run
- FAST solutions
- Target customer - Fortune 500
- KDMs – IT, operations, facilities

Focus Markets
- Manufacturing
- Healthcare & LS
- Energy & Utilities
- Travel, transport & logistics

Business Model
- Spread NRE cost over multiple clients
- Monetize as-a-service
- Partnerships to share investments & rewards
- Transaction based pricing

Solution & SME expertise
- Dedicated unit
- Cross selling – focus customers
- Industry experts domain expertise
- Dedicated solution team

Marketing
- Dedicated brand – IoT WoRKS
- Differentiated value prop.
- Brand credibility
- Thought leadership
- Digital campaigns
- Lead Generation

Partnerships
- Intel, IBM, Cisco, Microsoft, Moog, GE, SAP etc
- White labeled Partnerships
- Across Consulting, Connectivity, platform, analytics
WE ARE DELIVERING BUSINESS OUTCOMES ACROSS INDUSTRIES WITH LARGE SCALE IOT SOLUTIONS

**Global pay station manufacturer**

Smart parking station connectivity and management solution
- Increased revenue by 30%
- Reduced Operating Cost by 12%

**Leading global aircraft manufacturer**

Predictive maintenance analytics solution
- Reduced time to insight from 30-90 days to 1 day
- Established data analytics-as-a-service

**Global Mining organisation**

IoT enabled smart helmet implementation
- Reduced blast roll-call from 3-4 hours to 5 minutes
- Working on Fatality rate to be Zero in 3 years time from equipment

**Leading Medical Devices Company**

Connected hospital strategy implementation
- 27% improvement in device uptime
- 18% reduction in field visit cost
REMOTE MONITORING SERVICES PLATFORM FOR A FORTUNE 200 GLOBAL ENGINEERING CONGLOMERATE

1Mn+ DEVICES ACROSS 18,000+ CUSTOMERS IMPACTED BY THE REMOTE MONITORING SERVICES PLATFORM

WHAT HCL DID
- Reduced support cost by 15% through a connected platform
- Augmented customer experience by introducing value added services
- New remote services revenue stream with a Multi-Billion Dollar potential being developed

ENABLER / PARTNER

HOW HCL DID
- Platform
- Seamless Data Acquisition
- Data Management Platform
- Unlocking Potential
- Value Added Services
- New Product Development
- Big Data
- Integrated Solution
- Full service Contracts
- Cross sell services
- Upsell services

End to End Solution to Define, Build and Run IoT in Client’s Business Context

CHALLENGES HCL RESOLVED
- Different devices communicating via 118 different protocols across locations
- One-time sale with low services revenues through AMCs can be converted into multimillion dollar service model
- High service cost due to multiple diagnostics and resolution trips
- Lack of integrated customer view as each product has separate service team
FINALLY, THE BUSINESS IMPACT & OUTCOME FOR HCL

**IoT WoRKS: Winning Market Traction**
- 1 new customer win every month in CY
- 30% + opportunity conversion ratio for IoT WoRKS
- 15% of IoT WoRKS revenue from new customers of HCL
- Wins across all key industry focus areas
- 10x growth in Qtrly revenue run rate in 3 Qtrs since formation
- 7x growth in Qualified Funnel in the same time period.
- 4 new G2000 Logos through IoT

**IoT WoRKS : Driving the ecosystem leverage**
- Solving hard industry problems with partners
  *Accelerating clinical trials through White Labelled Partner*
- Joint GTM & business development with strategic partners
- Focused investment in Lab
  *Incubation center in Redmond to leverage Microsoft Azure IoT suite*

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- Develop key IP’s proactively for use cases
- Monetize across multiple clients
- Partnerships to share investments & rewards
- Outcome Pricing in end to end cases
THANK YOU – PLEASE VISIT OUR DEMO ZONE IN BOARDROOM 1