This presentation may contain certain “forward looking” statements, which involve a number of risks, uncertainties and other factors that could cause actual results to differ materially from those that may be projected by these forward looking statements. These uncertainties have been detailed in the reports filed by Wipro with the Securities and Exchange Commission and these filings are available at www.sec.gov. This presentation also contains references to findings of various reports available in the public domain. Wipro makes no representation as to their accuracy or that the company subscribes to those findings.
Wipro’s Global IT business – An overview

<table>
<thead>
<tr>
<th>Years</th>
<th>Clients</th>
<th>Global development centers</th>
<th>Employees</th>
<th>Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-00</td>
<td>150</td>
<td>14</td>
<td>8</td>
<td>240</td>
</tr>
<tr>
<td>2000-01</td>
<td>160</td>
<td>22</td>
<td>10</td>
<td>384</td>
</tr>
<tr>
<td>2001-02</td>
<td>180</td>
<td>26</td>
<td>13</td>
<td>475</td>
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<tr>
<td>2002-03</td>
<td>272</td>
<td>28</td>
<td>19</td>
<td>625</td>
</tr>
<tr>
<td>2003-04</td>
<td>339</td>
<td>34</td>
<td>29</td>
<td>934</td>
</tr>
<tr>
<td>2004-05</td>
<td>386</td>
<td>38</td>
<td>(thousands)</td>
<td>1350</td>
</tr>
</tbody>
</table>

**Partner to industry leaders and challengers**
- 89 global 500 clients
- 151 clients among Forbes 2000

**Global footprint**
- Listed on NYSE
- 35 countries
- 9 near shore development centers

**Diverse talent pool**
- 23 nationalities
- 2000 domain consultants

**Sustained growth**
- CAGR of 45% in last 5 years
- Part of NYSE’s TMT (Technology-Media-Telecom) Index, NSE Nifty Index and BSE Sensex

*Based on actuals till Dec 2004 and guidance for quarter ending March 2005

*Ranked leader by IDC, MetaGroup, Forrester – 2004
Awarded the highest rating in Stakeholder Value Creation & Corporate Governance by ICRA, an Associate of Moody’s Investor Services

Wipro confidential
# Our Recent Performances

## Total Revenue (Rs M)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>5 Quarter CQGR-9.1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep 03</td>
<td>13,506</td>
</tr>
<tr>
<td>Dec 03</td>
<td>15,621</td>
</tr>
<tr>
<td>Mar 04</td>
<td>17,614</td>
</tr>
<tr>
<td>Jun 04</td>
<td>17,696</td>
</tr>
<tr>
<td>Sep 04</td>
<td>19,797</td>
</tr>
<tr>
<td>Dec 04</td>
<td>$483 M, 20,902</td>
</tr>
</tbody>
</table>

## Global IT Services Revenue ($ M)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>5 Quarter CQGR-9.7%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep 03</td>
<td>222</td>
</tr>
<tr>
<td>Dec 03</td>
<td>250</td>
</tr>
<tr>
<td>Mar 04</td>
<td>276</td>
</tr>
<tr>
<td>Jun 04</td>
<td>300</td>
</tr>
<tr>
<td>Sep 04</td>
<td>327</td>
</tr>
<tr>
<td>Dec 04</td>
<td>352</td>
</tr>
</tbody>
</table>

## Net Income (Rs M)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>5 Quarter CQGR-13.2%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep 03</td>
<td>2,294</td>
</tr>
<tr>
<td>Dec 03</td>
<td>2,663</td>
</tr>
<tr>
<td>Mar 04</td>
<td>3,254</td>
</tr>
<tr>
<td>Jun 04</td>
<td>3,254</td>
</tr>
<tr>
<td>Sep 04</td>
<td>3,835</td>
</tr>
<tr>
<td>Dec 04</td>
<td>$99 M, 4,271</td>
</tr>
</tbody>
</table>

## Global IT Services Operating Margin *

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Expansion of 560 basis points over last 5 Quarters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep 03</td>
<td>20.4%</td>
</tr>
<tr>
<td>Dec 03</td>
<td>21.0%</td>
</tr>
<tr>
<td>Mar 04</td>
<td>23.4%</td>
</tr>
<tr>
<td>Jun 04</td>
<td>25.2%</td>
</tr>
<tr>
<td>Sep 04</td>
<td>26.9%</td>
</tr>
<tr>
<td>Dec 04</td>
<td>26%</td>
</tr>
</tbody>
</table>

* Operating Margin = Earnings before Interest & Taxes / Revenue

---

**Sustaining momentum – delivering growth**
Highlights of the Quarter ended December 31, 2004

- Net Income growth of 60%, Global IT Revenue at $352M ahead of guidance of $347M
- Broad based growth across key Verticals; Financial Services, Telecom and Manufacturing leading the pack with double digit sequential growth
- Our differentiated services - Technology Infrastructure Services and Testing Services sustained momentum, posting 34% seq (80% YOY) & 15% seq (79% YOY) growth respectively
- Europe geography grew 10% seq (66% YOY); fourth consecutive quarter of double digit sequential growth
- Over 30% of our top 50 customers grew double digit, indicating a broad based growth in demand
- Combination of customer mix, service mix and continued operational improvements led to a 1% sequential growth in price realization for Onsite as well as Offshore projects
- 26 new customers added during the quarter including 4 Fortune 1000 / Global 500 customers
- Attrition came down to 12% in IT Services, a sharp decrease from previous quarters

Strong performance by balancing the short term and long term
Platform for Sustainable Growth

No. of Active Customers

<table>
<thead>
<tr>
<th></th>
<th>Dec 03</th>
<th>Sep 04</th>
<th>Dec 04</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>332</td>
<td>370</td>
<td>386</td>
</tr>
</tbody>
</table>

Annualized Revenue per Customer

<table>
<thead>
<tr>
<th></th>
<th>Dec 03</th>
<th>Sep 04</th>
<th>Dec 04</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2.68 m</td>
<td>$3.14 m</td>
<td>$3.24 m</td>
<td></td>
</tr>
</tbody>
</table>

Million dollar Revenue Customers

<table>
<thead>
<tr>
<th></th>
<th>Dec 03</th>
<th>Sep 04</th>
<th>Dec 04</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;$10 m Run-rate</td>
<td>25</td>
<td>31</td>
<td>34</td>
</tr>
<tr>
<td>&gt;$1 m Run-rate</td>
<td>128</td>
<td>149</td>
<td>153</td>
</tr>
</tbody>
</table>

Price Realization

- Offshore – 6.9% YoY growth
- Onsite – 10.3% YoY growth

<table>
<thead>
<tr>
<th></th>
<th>Dec 03</th>
<th>Sep 04</th>
<th>Dec 04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offshore</td>
<td>3,966</td>
<td>10,096</td>
<td>11,033</td>
</tr>
<tr>
<td>Onsite</td>
<td>4,219</td>
<td>4,262</td>
<td>4,262</td>
</tr>
</tbody>
</table>

Data for quarter ended respective months
Metrics excluding BPO

Revenues from Fortune customers – 69% for quarter ended Dec 2004
Future Belongs to Differentiated & Broad Range of Services

Wipro’s Global IT Revenue pie

Q3 2004-05
$352 M

Indian Export Potential*

- Custom App Dev & Maintenance 34%
- SI/Consulting 2%
- Infrastructure Outsourcing 8%
- Package Implementation 11%
- IT Enabled Services / BPO 11%
- R&D Services 27%
- Testing Services 7%

Source: Mckinsey-NASSCOM Study, NASSCOM, Company estimate (all figures in USD B)

Percentages below the pie chart represent Wipro’s distribution of Revenues for the quarter ended Dec 2004

- 2003
- 2008
- CAGR 25%
- CAGR 82%
- CAGR 91%
- CAGR 70%
- CAGR 30%
- CAGR 38%

Wipro confidential
Strength of Business Model reflected in 3-Dimensional Growth

Revenue Mix

Vertical distribution

- Telecom 17%
- OEM 15%
- Telecom Service Providers 12%
- Energy & Utilities 11%
- Others 10%
- Manufacturing 12%
- Retail 12%
- Finance 18%
- Embedded 5%

Geographical distribution

- North America 66%
- Europe 30%
- Japan 4%
- Others 10%
- Telecom Service Providers 5%

Growth rates

<table>
<thead>
<tr>
<th>Service Lines</th>
<th>YOY Growth Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology Infrastructure Services</td>
<td>80%</td>
</tr>
<tr>
<td>Package Implementation</td>
<td>43%</td>
</tr>
<tr>
<td>ADM</td>
<td>35%</td>
</tr>
<tr>
<td>Business Process Outsourcing</td>
<td>48%</td>
</tr>
<tr>
<td>Testing &amp; Interops</td>
<td>79%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business Lines</th>
<th>YOY Growth Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D Services</td>
<td>41%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>52%</td>
</tr>
<tr>
<td>Enterprise Solutions</td>
<td>35%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geographies</th>
<th>YOY Growth Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>31%</td>
</tr>
<tr>
<td>Europe</td>
<td>66%</td>
</tr>
<tr>
<td>Japan</td>
<td>34%</td>
</tr>
</tbody>
</table>

For Quarter ended Dec 2004 for IT Services only

Diversified revenue stream with broad-based growth
**India, Middle East & Asia Pac IT Business**

- **Sustained leadership position in India as reflected by customer confidence**
  - Leading Systems and Network integrator
  - Successful Total Outsourcing deals
  - Multiple end-to-end ERP rollouts
- **Incubator for Global IT Services business:**
  - R&D Services – 1992
  - Technology Infrastructure Services - 1998
  - Telecom Service Providers practice – 2000
  - Infrastructure Security – 2001
- **Significant progress in penetrating Middle East markets**

**Revenue (Rs. M)**
- ~2,696
- ~3,093
- ~3,240

**Operating Income* (Rs. M)**
- ~185
- ~225
- ~267

* Operating Income = Earnings before Interest & Taxes

**YoY growth – 20%**
- Dec 03: ~2,696
- Sep 04: ~3,093
- Dec 04: ~3,240

**YoY growth – 45%**
- Dec 03: ~185
- Sep 04: ~225
- Dec 04: ~267

Increasingly becoming a Services centric business - 37% Revenues from Services, 63% from Hardware
Looking Ahead

“For the quarter ending March 2005, we expect our Revenue from our Global IT Services business to be approximately $370 million.”

Underlying factors:

• Sustained volume growth in IT Services

• Pricing to move in a narrow range after significant up-tick in previous quarters

• Leveraging Utilization & Onsite-Offshore mix for optimal efficiency

• Increasing campus mix to optimize cost levels

• Rupee appreciation would impact Operating Margins
Building a self-reinventing Business Model

Consistent on Growth
Consistent on Quality
Consistent on Innovation

Delivered results

Pride of place as employer of choice
Constantly augment talent sources

Audacious Articulated

Scalability

Quality

Vision

Long term Vision + Short term Results + Scalable Processes

= Stakeholder Value Creation

Sustainable Value Creation for all stakeholders

Industry vertical structure
Service line incubation
Expand addressable market

High focus
First globally - CMM, CMMi, P-CMM
Six Sigma

Our DNA
**TO SUM UP**

**Widest Range of Services**

*Wipro’s Global IT Revenue pie*

![Revenue Pie Chart]

- **Q3 2004-05**
  - Total Revenue: $352M

**Indian Export Potential**

- **2003**: 15 (CAGR 25%)
- **2008**: 21 (CAGR 38%)

**Vertical-wise composition (% of Revenue for quarter ended Dec 2004)**

<table>
<thead>
<tr>
<th>Service</th>
<th>Revenue 2004-05</th>
<th>CAGR 2003-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telecom Service Providers</td>
<td>$21,230</td>
<td>CAGR 70%</td>
</tr>
<tr>
<td>Telecom OEM</td>
<td>$3.14 m</td>
<td>CAGR 30%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>$8.0 m</td>
<td>CAGR 91%</td>
</tr>
<tr>
<td>Others</td>
<td>$3.6 m</td>
<td>CAGR 82%</td>
</tr>
<tr>
<td>Energy &amp; Utilities</td>
<td>$3.6 m</td>
<td>CAGR 91%</td>
</tr>
<tr>
<td>Retail</td>
<td>$4.9 m</td>
<td>CAGR 25%</td>
</tr>
<tr>
<td>Retail Complementary</td>
<td>$2.3 m</td>
<td>CAGR 11%</td>
</tr>
<tr>
<td>R&amp;D Services</td>
<td>$4.9 m</td>
<td>CAGR 55%</td>
</tr>
<tr>
<td>Others</td>
<td>$1.7 m</td>
<td>CAGR 27%</td>
</tr>
<tr>
<td>Custom App Dev &amp; Maintenance</td>
<td>$1.7 m</td>
<td>CAGR 15%</td>
</tr>
<tr>
<td>SI/Consulting</td>
<td>$0.8 m</td>
<td>CAGR 11%</td>
</tr>
<tr>
<td>IT Enabled Services / BPO</td>
<td>$0.4 m</td>
<td>CAGR 10%</td>
</tr>
<tr>
<td>Infrastructure Outsourcing</td>
<td>$0.1 m</td>
<td>CAGR 2%</td>
</tr>
<tr>
<td>Package Implementation</td>
<td>$0.2 m</td>
<td>CAGR 3%</td>
</tr>
<tr>
<td>Testing</td>
<td>$4.9 m</td>
<td>CAGR 38%</td>
</tr>
</tbody>
</table>

**Diversified Vertical Expertise**

*Vertical-wise composition (% of Revenue for quarter ended Dec 2004)*

- **Telecom OEM**: 17%
- **Telecom Service Providers**: 15%
- **Manufacturing**: 12%
- **Others**: 10%
- **Energy & Utilities**: 11%
- **Retail**: 12%
- **Finance**: 18%
- **Embedded**: 15%
- **Others**: 10%

**Strong Financial Position**

*Cash & Cash equivalents (Rs M)*

- **Dec 03**: $21,230
- **Sep 04**: $20,365
- **Dec 04**: $24,820

**Average annualized Revenue per Customer**

- **Dec 03**: $2.68 m
- **Sep 04**: $3.14 m
- **Dec 04**: $3.24 m
Establishing global process leadership

The Wipro Q-cult journey

Sambuddha Deb
Chief Quality Officer
February 25th 2005
Customers view of quality – Tracking critical parameters for performance improvement

Simultaneous focus on timeliness, defects and productivity

Field Error Rate (Defects / Mloc)

Schedule Adherence

Lower schedule overrun cost

Productivity Index

Lower maintenance cost

Lower development cost

Defects
Quality processes that ensure lower TCO

- Higher productivity: 37% higher productivity than industry ratio*
  - Lower costs

- Schedule adherence: 91% projects completed on time, industry average of 76%*
  - On time delivery

- Post delivery defect rate: 120 defects/MLOC
  - 55% lower than industry*
  - Assured quality

* Worldwide IT Benchmark report 2004 – META Group and Bangalore SPIN
Q-cult: Enterprise-wide quality culture for continuous improvement

Software process achievement Award 2003 from IEEE USA

- 1995: Re-certified twice, Mature processes, Metrics collection begun
- 1997: Enterprise-wide process defined
- 1998: On the path to continuous improvement
- 2000: Defects prevention practices initiated at project level
- 2001: Industry-specific quality standards
- 2001: Six sigma methodology broad-based
- 2002: Gearing up for System Integration
- 2002: Information and Network Security Processes
- 2003: COPC, BS 15000 and British data protection act compliance
Integrate people, processes & technologies

Total quality framework – well defined and articulated

.... To operationalize strategy and accomplish the Vision
Defects cost the U.S. economy $59.5 billion* a year; about 0.6 percent of gross domestic product
- 2002 Report from US Dept. of Commerces
National Institute of Standards and Technology

A significant Measure -
Changing requirements
Manage requirements volatility
Integrating six sigma in software development

Software development life cycle

Customer interaction

<table>
<thead>
<tr>
<th>T O O L S</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>Concept generation</td>
</tr>
<tr>
<td>Kano model</td>
<td>Design FMEA</td>
</tr>
<tr>
<td>QFD</td>
<td>Correlation</td>
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<td>Benchmarking</td>
<td>Regression</td>
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<td></td>
<td>Hypothesis testing</td>
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<td></td>
<td>DOE</td>
</tr>
<tr>
<td></td>
<td>Orthogonal arrays</td>
</tr>
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</table>

Rigorous design & implementation

Rigorous in-process metrics and cause analysis
# OA Test result summary

<table>
<thead>
<tr>
<th>Business Function</th>
<th>Factors</th>
<th>Levels</th>
<th>Total runs</th>
<th>Actual runs by OA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hierarchy Library – Process</td>
<td>3</td>
<td>6, 4, 2</td>
<td>48</td>
<td>28</td>
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<tr>
<td>Hierarchy Library – Activity</td>
<td>3</td>
<td>6,4, 2</td>
<td>48</td>
<td>28</td>
</tr>
<tr>
<td>Hierarchy Library – Risk</td>
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<td>9,4,4</td>
<td>144</td>
<td>43</td>
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<tr>
<td>Hierarchy Library – Control</td>
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<td>9,4,5</td>
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<tr>
<td>Process Hierarchy - Process</td>
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<td>32</td>
<td>23</td>
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<tr>
<td>Process Hierarchy - Activity</td>
<td>3</td>
<td>4,2,4</td>
<td>32</td>
<td>23</td>
</tr>
<tr>
<td>Process Hierarchy - Risk</td>
<td>3</td>
<td>4,2,4</td>
<td>32</td>
<td>23</td>
</tr>
<tr>
<td>Process Hierarchy - Control</td>
<td>3</td>
<td>4,2,4</td>
<td>32</td>
<td>23</td>
</tr>
</tbody>
</table>

236 test runs against 548 – more than 50% savings in testing
Next S Curve in Ops Excellence

Context

- Omnipresence of CMMI & 6S
- Customer preference of risk sharing contracts
- Shift from technical to business metrics
- Need to improve/sustain margins

Lean in ‘Wipro’

- Focuses on cycle time & throughput improvement without compromising quality
- Key principles:
  - Pull – Deliver customer value earlier
  - Flow – Wait states reductions, reducing handoffs, quick feedback
  - In station Quality – to improve defect resolutions upstream

Applying ‘Lean’ to move up the next S-Curve in Ops Excellence

- Concurrent Engineering
- Early Feedback
- Pull
- Load Balancing (TAKT)
- In station Quality
- Continuous Integration
- Standardization
- Automation
- Test Setup Reduction
- Test optimization
An incentive system for a top automobile manufacturer

Context

- Large scale software development for common repository of incentive payment data and collaborative tools
- Complex project involving cutting edge Data warehouse technology

Lean Principles Implemented

- Concurrent Engineering
- Rapid Prototyping for early feedback
- Workload balancing and customer Pull based scheduling
- Visual Charts for Control
- Poke Yoke for Quality

15% effort savings in software lifecycle
Quality journey – An organization wide participation

“Quality is everyone’s responsibility” - Deming
Customer satisfaction – we are not the only ones saying it

![Average Ratings Chart]

<table>
<thead>
<tr>
<th>Year</th>
<th>Delivery</th>
<th>Quality</th>
<th>Service</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2001</td>
<td>3.95</td>
<td>3.86</td>
<td>3.91</td>
<td>3.85</td>
</tr>
<tr>
<td>2001-2002</td>
<td>4.27</td>
<td>4.13</td>
<td>4.2</td>
<td>4.27</td>
</tr>
<tr>
<td>2002-2003</td>
<td>4.35</td>
<td>4.21</td>
<td>4.38</td>
<td>4.31</td>
</tr>
<tr>
<td>2003-2004</td>
<td>4.05</td>
<td>3.88</td>
<td>3.88</td>
<td>4.1</td>
</tr>
</tbody>
</table>

![Satisfied Customers Chart]

<table>
<thead>
<tr>
<th>Year</th>
<th>Delivery</th>
<th>Quality</th>
<th>Service</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2001</td>
<td>78</td>
<td>68</td>
<td>55</td>
<td>79</td>
</tr>
<tr>
<td>2001-2002</td>
<td>88</td>
<td>77</td>
<td>76</td>
<td>89</td>
</tr>
<tr>
<td>2002-2003</td>
<td>90.4</td>
<td>82.3</td>
<td>82.9</td>
<td>89.5</td>
</tr>
<tr>
<td>2003-2004</td>
<td>81</td>
<td>74</td>
<td>72</td>
<td>82</td>
</tr>
</tbody>
</table>

“I was very impressed with the commitment and execution that Wipro developed in a very aggressive time frame. They stepped up to the challenge and delivered an industry exclusive system that will benefit our Builder/Distributors.”

Dan Claypool

"Wipro has consistently delivered offshore projects on time, on budget and at required levels of quality. The relationship is very cost effective for PacifiCorp, saving as much as 35%"

David Maudin

2003-04 survey was done with a redesigned survey with Gallup’s help
Providing high quality processes

“Through a single-minded but judicious emphasis on quality as a guiding principle throughout its delivery processes, Wipro has shown impressive improvements in delivery capabilities, client satisfaction, and the ability to continually reduce the cost of services.”

Wipro: Best Practices in CMM-Based Software Delivery, Gartner 27 May 2003

“The prime differentiator of Wipro’s service proposition was its approach to quality management and processes.”

Scottish Parliament votes for offshore service firm, Butler Group Review, July 2003

“…..With the combination of SEI Level 5 certification and Six Sigma, Wipro can offer its customers extremely high quality, low risk services.”

Mapping offshore – A new competitive landscape, IDC, May 2004

“Wipro clients see additional application maintenance productivity of 10% to 15% from added familiarity with systems; another 10% to 15% raise in productivity after applying Wipro’s CMM-based methodology and consolidating redundant programs applications; and yet another 3% to 30% productivity improvement thanks to process automation and tools.”

Offshore Outsourcing: The complete guide, Forrester, Sep 2004
“If I had 8 hours to chop down a tree, I’d spend 6 sharpening the axe.”
- Abraham Lincoln

Quality – The cutting edge
Talent Availability
2005-06

Laxman Badiga
Feb 25th 2005
NYSE
Agenda

- Industry scenario and Academic alliances

- Wipro Technologies
  - Talent Sourcing
  - Talent Retention
  - Talent Transformation
Current Scenario of IT Manpower

IT MANPOWER EMPLOYED (2004 – 2005 Estimated)
- 1.05 m (203K higher than 2003-2004).
  - 697K in IT sector (Export, Domestic & Captive)
  - 348K in ITES
- Percentage growth of 24% over 2003-2004

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>IT Software Services (Break Up)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT Software Services</td>
<td>242</td>
<td>360</td>
<td>416</td>
<td>490</td>
<td>588</td>
<td>697</td>
</tr>
<tr>
<td>IT Enabled Services</td>
<td>42</td>
<td>70</td>
<td>106</td>
<td>180</td>
<td>254</td>
<td>348</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
<td>430</td>
<td>522</td>
<td>670</td>
<td>842</td>
<td>1045</td>
</tr>
<tr>
<td>% increase in Total Manpower</td>
<td>51.41</td>
<td>21.40</td>
<td>28.35</td>
<td>25.67</td>
<td>24.11</td>
<td></td>
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<tr>
<td>IT Software Services (Break Up)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Software Exports Sector</td>
<td>110</td>
<td>162</td>
<td>170</td>
<td>205</td>
<td>270</td>
<td>345</td>
</tr>
<tr>
<td>Software Domestic sector</td>
<td>17</td>
<td>20</td>
<td>22</td>
<td>25</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>Software - captive in user orgs</td>
<td>115</td>
<td>178</td>
<td>224</td>
<td>260</td>
<td>290</td>
<td>322</td>
</tr>
</tbody>
</table>

Source: NASSCOM
Manpower Supply – Engineering

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Admission</th>
<th>Annual Total</th>
<th>Annual Passout (Graduates)</th>
<th>IT Graduates</th>
<th>Total IT Pool</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Degree</td>
<td>Diploma</td>
<td>Degree</td>
</tr>
<tr>
<td>2001-02</td>
<td>333</td>
<td>234</td>
<td>109</td>
<td>125</td>
<td>71</td>
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<tr>
<td>2002-03</td>
<td>366</td>
<td>259</td>
<td>129</td>
<td>130</td>
<td>82</td>
</tr>
<tr>
<td>2003-04</td>
<td>303</td>
<td>215</td>
<td>112</td>
<td>103</td>
<td>95</td>
</tr>
<tr>
<td>2004-05</td>
<td>398</td>
<td>284</td>
<td>155</td>
<td>129</td>
<td>100</td>
</tr>
<tr>
<td>2005-06</td>
<td>481</td>
<td>348</td>
<td>210</td>
<td>138</td>
<td>111</td>
</tr>
<tr>
<td>2006-07</td>
<td>527</td>
<td>382</td>
<td>235</td>
<td>147</td>
<td>117</td>
</tr>
</tbody>
</table>

Source – NASSCOM
- Over 380 Universities i.e. > 920 colleges (Engineering Degree/ Diploma) providing computer education
- Wastage Ratio is assumed as 21% for Degree & 36% for Diploma holders as per historical trends
- Actual number of IT graduates has shown an increase from the projected numbers especially diploma
- However, admission to engineering and annual pass out (including Non IT) has shown a steep decline
### Total Supply Entering IT Workforce

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Number of Engineering Graduates</td>
<td>201</td>
<td>234</td>
<td>259</td>
<td>215</td>
<td>284</td>
<td>348</td>
<td>382</td>
</tr>
<tr>
<td>Degree (4 year course)</td>
<td>82</td>
<td>109</td>
<td>129</td>
<td>112</td>
<td>155</td>
<td>210</td>
<td>235</td>
</tr>
<tr>
<td>Diploma (3 year course)</td>
<td>119</td>
<td>125</td>
<td>130</td>
<td>103</td>
<td>129</td>
<td>138</td>
<td>147</td>
</tr>
<tr>
<td>IT Graduates (CSC, Elect, Telecom)</td>
<td>94</td>
<td>115</td>
<td>127</td>
<td>141</td>
<td>165</td>
<td>181</td>
<td>193</td>
</tr>
<tr>
<td>Graduates Degree</td>
<td>53</td>
<td>71</td>
<td>82</td>
<td>95</td>
<td>100</td>
<td>111</td>
<td>117</td>
</tr>
<tr>
<td>Graduates Diploma</td>
<td>41</td>
<td>44</td>
<td>45</td>
<td>46</td>
<td>65</td>
<td>70</td>
<td>76</td>
</tr>
<tr>
<td>Workforce Entering IT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Degree (IT Graduates)</td>
<td>43</td>
<td>57</td>
<td>47</td>
<td>55</td>
<td>58</td>
<td>64</td>
<td>68</td>
</tr>
<tr>
<td>Engineering Diploma (IT Graduates)</td>
<td>32</td>
<td>34</td>
<td>25</td>
<td>25</td>
<td>36</td>
<td>39</td>
<td>41</td>
</tr>
<tr>
<td>Non IT Engineers</td>
<td>32</td>
<td>36</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Other Graduates (Other Disciplines)</td>
<td>27</td>
<td>32</td>
<td>35</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Total Supply Entering IT Workforce</td>
<td>134</td>
<td>159</td>
<td>147</td>
<td>150</td>
<td>164</td>
<td>173</td>
<td>180</td>
</tr>
</tbody>
</table>

Data in ‘000

**Source: Nasscom**

Total Supply Entering the workforce has increased

Increase in Engineering Degree Graduates is almost the same as projected earlier

Increase in Engineering Diploma graduates entering the workforce has been higher than projected
### Demand – Supply Scenario

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Manpower in IT</td>
<td>522</td>
<td>670</td>
<td>842</td>
<td>1045</td>
<td>1316</td>
<td>1662</td>
<td>2110</td>
<td>2662</td>
</tr>
<tr>
<td>Additional Manpower required</td>
<td>92</td>
<td>148</td>
<td>172</td>
<td>203</td>
<td>271</td>
<td>346</td>
<td>448</td>
<td>552</td>
</tr>
<tr>
<td>Total Manpower in IT Services</td>
<td>416</td>
<td>490</td>
<td>588</td>
<td>697</td>
<td>839</td>
<td>1010</td>
<td>1215</td>
<td>1462</td>
</tr>
<tr>
<td>Additional Manpower Required in IT Services</td>
<td>56</td>
<td>74</td>
<td>98</td>
<td>109</td>
<td>142</td>
<td>171</td>
<td>205</td>
<td>247</td>
</tr>
<tr>
<td>Supply of IT Engineering Degree Graduates</td>
<td>71</td>
<td>81</td>
<td>95</td>
<td>100</td>
<td>111</td>
<td>117</td>
<td>123</td>
<td>129</td>
</tr>
<tr>
<td>Manpower Excess</td>
<td>15</td>
<td>7</td>
<td>-3</td>
<td>-9</td>
<td>-31</td>
<td>-54</td>
<td>-82</td>
<td>-118</td>
</tr>
<tr>
<td>Supply of IT Engineering Graduates (Degree &amp; Diploma)</td>
<td>115</td>
<td>127</td>
<td>141</td>
<td>165</td>
<td>181</td>
<td>193</td>
<td>203</td>
<td>213</td>
</tr>
<tr>
<td>Manpower Excess</td>
<td>59</td>
<td>53</td>
<td>43</td>
<td>56</td>
<td>39</td>
<td>22</td>
<td>-2</td>
<td>-34</td>
</tr>
<tr>
<td>Total Supply Engineering (Non IT + Graduates Entering IT)</td>
<td>67</td>
<td>74</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Manpower Excess</td>
<td>126</td>
<td>127</td>
<td>113</td>
<td>126</td>
<td>109</td>
<td>92</td>
<td>68</td>
<td>36</td>
</tr>
</tbody>
</table>

- **Source:** Nasscom
- **Projection for 2009 IT growth – 50Bn**
- *70,000 is the inflow from Non-IT streams*
- **Out turn of 540,000 from science streams funneled for ITES space**
### ITES

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Manpower in ITES</td>
<td>106</td>
<td>180</td>
<td>254</td>
<td>348</td>
<td>477</td>
<td>653</td>
<td>895</td>
<td>1200</td>
</tr>
<tr>
<td>Additional Manpower Required in ITES</td>
<td>36</td>
<td>74</td>
<td>74</td>
<td>94</td>
<td>129</td>
<td>176</td>
<td>242</td>
<td>305</td>
</tr>
</tbody>
</table>

### Supply of Graduates 2004 E

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Arts</td>
<td>1150000</td>
</tr>
<tr>
<td>Science</td>
<td>540000</td>
</tr>
<tr>
<td>Commerce</td>
<td>480000</td>
</tr>
<tr>
<td>Engineering Degree (Non IT)</td>
<td>15000</td>
</tr>
<tr>
<td>Engineering Diploma (Non IT)</td>
<td>65000</td>
</tr>
<tr>
<td>Absorption</td>
<td>40000</td>
</tr>
</tbody>
</table>

| Total Supply (ITES)     | 2180000 |
| Demand                  | 128760   |
| Excess Manpower         | 2051240  |

Source: NASSCOM, Institute of Applied Manpower Research, Ministry of Human Resources
WASE - An Innovation in Talent Farming

WASE program provides live project exposure and an opportunity to pursue an 8-semester (four year) Off-campus collaborative MS program from Birla Institute of Science & technology (BITS), Pilani (India)

- 550 students have graduated through WASE so far
- 1500 intake planned for 2005-06

Since 1995 and growing

WASE is open only for fresh science (B.Sc./BCA/BCM) graduates
Attracting Talent – The Wipro Way

Recruitment Funnel

Career Site

Candidate Applications
Screen / Manage
Evaluation
Offer
Join
Retain

Track Applicant

Data for year 2004-05

Wipro Database
Active: 320,000
Latent: 300,000
Emp Ref / Direct: 96%
Search Firms: 4%

YTD Joinees (IT + ITES): 23800

WT Manpower Figures

BPO
9300
‘04-’05*

BPO
5561
‘03-’04

BPO
19300
‘02-’03

BPO
2125
‘01-’02

BPO
6700
‘00-’01

BPO
9900
‘99-’00

BPO
5200
‘98-’99

BPO
3441
‘97-’98

BPO
3176
‘96-’97

*YTD

Wipro Database

Search Firms: 4%
Emp Ref / Direct: 96%

YTD Joinees (IT + ITES): 23800

WT Manpower Figures

BPO
9300
‘04-’05*

BPO
5561
‘03-’04

BPO
19300
‘02-’03

BPO
2125
‘01-’02

BPO
6700
‘00-’01

BPO
9900
‘99-’00

BPO
5200
‘98-’99

BPO
3441
‘97-’98

BPO
3176
‘96-’97

*YTD

Wipro confidential
Snapshot of Wipro’s Talent Pool

**Young and experienced**
- Average age of employees – 28 yrs
- Average tenure of top 100 managers - 11 years

**Geographically dispersed**
- 39000+ employees
- Approx. 6000 spread across North America, Europe and Japan
- Approx. 33000 working offshore in India

**Strong education**
- 66% University graduates
- 28% Masters degree holders
- 50+ Doctorates

**Multicultural**
- Workforce comprising people of 23 different nationalities
Talent Transformation - Across all Aspects

**Business skill transformation**
- Leading the client – CLIP/ACLIP programs
- 7 domain knowledge courses

**Technology transformation**
- 4 technology streams covering 78 courses
- Automated assessment center catering to 30+ technologies
- Project readiness and architect readiness program

**Culture transformation**
- Cross cultural training programs for US, UK, Japan, India, etc.
- 9 month Japanese certification program – Shimpo
- 160-hour certification program French (Alliance Françoise), German (Max Mueller)

**Behavioral skill transformation**
- Behavioral ladder training – FMP->GMP -> VMP
- Communication skill, Interpersonal skills, relationship management training

**Training infrastructure**
- Pioneers of the web based “World Campus” initiative providing courses to 1000 employees world over at a single time
- Ability to conduct training for 1200 persons at one time
- 40 state-of-the-art training rooms
- 2,40,000 man days of training annually, 70 full time instructors
“Eye of an employee” for complete information updates about Wipro

- Ensure employee empowerment
- Enables employees to have a two-way communication with the company
- Bring together the growing community across the globe
FINANCE SOLUTIONS

Girish Paranjpe
President Finance Solutions
Finance solutions

Banking and Financial Services (17)
- Deposits
- Wholesale Banking
- Consumer Credit
- Payments

Securities & Capital Markets (22)
- Brokerage
- Global Custody
- Asset Management
- Transfer Agency
- Exchanges
- Wealth Management
- Retirement planning

Insurance (13)
- Life
- Property & Casualty
- Brokerage
- Reinsurance

Integrated portfolio of Services
- Enterprise Applications
- Package Implementation
- Business Process Outsourcing
- Consulting
- Technology Infrastructure Services

Figures in brackets represents number of clients
Our idea so far

The roadmap

Win new deals

Penetrate into key competition accounts

Ensure growth of accounts

Strategic Level

360° service portfolio

Position as both an “integrated provider of solutions” and offering a “range of options”

Domain Competency

Leverage business knowledge to suggest innovative solutions

Engagement model

Focused hunters with select target accounts supported by pre sales excellence

Tactical Level

360° service portfolio

Leverage distinctive service lines like BPO, TIS, Quality Consulting, Testing etc

Understand business and proactively suggest solutions

Cross sell and up sell different service lines

Business Analysts in each account to analyze pain areas and propose solutions

Build on 3 axes simultaneously

Focused hunters with select target accounts supported by pre sales excellence

Experienced hunters, consultative selling, innovative pricing models, supported by pre sales excellence

Dedicated client engagement managers for high potential accounts and delivery excellence
360º Service Portfolio: Leading Life & Annuities insurance company

Service Portfolio

| Business Process Outsourcing | Including Senior Underwriting | Claims Processing Inbound customer |
| IT Consulting & Business Analysis | Quotation System | In-force Quotation System |
| Custom Development | Web Enabling |
| Application Enhancement | Quotation System | Pension Claims | Pensions Accounting |
| Application Maintenance | New Business | Product Launches |

- Dedicated ODC for mainframe support

Engagement roadmap
- February 2001: Relationship started with ADM engagement
- May 2001: Offshore development centre set up in Bangalore, later extended to another location
- Early 2003: BPO of underwriting with claims processing and customer servicing added in the middle of 2004
- Involved in a variety of projects including:
  - Business analysis and IT consulting
  - Mainframe maintenance
  - Client server development and migration
  - Multiple PC application support
  - Web enabling and maintenance of web based applications
  - Design and development of customized applications
  - IT infrastructure support
Domain competency

Dedicated Practice Groups of Business Consultants

- Insurance
  - L&A
  - P&C
  - Brokerage
  - Reinsurance

- Banking and Financial Services
  - Deposits
  - Wholesale Banking
  - Consumer Credit
  - Payments
  - Exchanges
  - Brokerage
  - Global custody
  - Asset Mgmt
  - Wealth Mgmt
  - Transfer Agency

- Securities and Capital Markets

Roles

- Practice Building
  - Thought Leadership

- Sales & Solution
  - Closely involved in sales and execution

- Training
  - Domain training for projects & practice

Acquisition of NerveWire to build domain skills and move up the value chain
Practice building: Thought leadership

Published whitepapers

Insurance
- Underwriting Transformation: Surviving the troubled waters
- UK Insurance Regulations: FSA and beyond

Banking and Financial Services
- Are FSIs leveraging reference data management to cut costs and manage risk

Securities and Capital Markets
- Regulation NMS and fast market
- The changing landscape of the US equity options market

Internal weekly magazine
- Covering region wise industry news, knowing your customers and competitor information, targeted at all the consultants in the vertical

Interaction with industry analyst groups & forums
- Close consulting and research interactions with Gartner, MetaGroup, Forrester, Celent
- Participation in industry forums
Sales and solution: Domain involvement at every stage

Maintenance and enhancement project

New development project

Business process outsourcing
### Training: “Lines of Code” to “Lines of Business”

<table>
<thead>
<tr>
<th>Course</th>
<th>Insurance/Finance 101</th>
<th>Insurance/Finance 102</th>
<th>Insurance/Finance 103</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Audience</strong></td>
<td>Targeted at all Software Engineers</td>
<td>Targeted at Module Leaders, PMs and above</td>
<td>Targeted at Domain Consultants</td>
</tr>
<tr>
<td><strong>Coverage</strong></td>
<td>Provides an overview of the insurance/finance industry.</td>
<td>Provides an in-depth coverage of the insurance/finance industry.</td>
<td>Industry qualifications</td>
</tr>
<tr>
<td><strong>Delivery</strong></td>
<td>CBT based course available on Wipro Intranet</td>
<td>8-day course conducted by an external agency</td>
<td>As per syllabus of industry organizations</td>
</tr>
</tbody>
</table>

Additionally, project specific training is conducted by the domain team.
**Engagement model: Front end - Dedicated sales and solution design team**

- Dedicated Sales Team in each geography focused on Insurance, Banking & Financial Services and Securities and Capital Market accounts ONLY
- Select list of target accounts including those of competition
- Focused teams for hunting and dedicated client engagement manager for key accounts
- Consultative sales model through Strategy Solutions Group and Wipro NerveWire
- Each target account also mapped to horizontal sales team like BPO, testing, quality for joint approach

- Dedicated Solutions Design team for Insurance, Banking & Financial Services and Securities and Capital Market
- Each account (prospect/existing) has a domain person/persons mapped to it
Engagement model: Back end – Execution through mature governance model

A leading insurance company

- Global Programme Director
- Programme Manager L o B
- Programme Manager L o B
- Programme Manager L o B
- Programme Manager L o B
- Delivery Manager L o B
- Delivery Manager L o B
- Delivery Manager L o B
- Delivery Manager L o B
- BA for each L o B
- BA for each L o B
- BA for each L o B
- BA for each L o B
- Software Quality Assurance Manager

- Client Engagement Manager

Review Frequency
- Yearly
- Quaterly
- Monthly
- Monthly
- Monthly

Reporting Frequency
- Yearly
- Quaterly
- Weekly Monthly
- Weekly Monthly
- Weekly Monthly

Reporting Template
- Custom built
- Custom built
- IT Weekly Report Review pack
- IT Weekly Report BU specific review pack
- IT Weekly Report Work Pack Report BU specific review pack

- Dedicated Delivery team for Insurance, Banking & FS and Securities & Capital Market
- IDEA GENERATOR FORUMS consisting all hands in account to proactively suggest solutions
- Quality processes (Six Sigma, CMMI) to ensure predictable delivery
## Finance solutions 2004-05: The returns

<table>
<thead>
<tr>
<th>Revenues</th>
<th>50 million USD</th>
<th>Over 200 million USD (annualized)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clients</td>
<td>Primarily from 2-3 midsized clients</td>
<td>About 15 large marquee accounts which can scale</td>
</tr>
<tr>
<td>Contribution to IT revenues</td>
<td>12%</td>
<td>18%</td>
</tr>
<tr>
<td>Employees</td>
<td>Average 700</td>
<td>3600 – November 2004</td>
</tr>
<tr>
<td>Service lines</td>
<td>Primarily application development/maintenance and e business</td>
<td>Basket of services (EAS/TIS/Testing/E Biz /Consulting) being provided to most key customers</td>
</tr>
<tr>
<td>Domain strength</td>
<td>Minimal</td>
<td>Significant presence</td>
</tr>
</tbody>
</table>

- CAGR: 44% - Higher than our competitors
- 50 clients: 1 client > 20 Million and 8 clients > 10 million annual run rate
Offshoring in financial services is becoming mainstream

- Within six years (2010), more than one-fifth of the financial services industry’s global cost base will have shifted offshore, resulting in an average savings of 37% per relocated process.

- Overall, the top 100 global financial services institutions – those with market capitalization exceeding $10 billion – will offshore approximately $210 billion of their cost base, with an average cost savings of more than $700 million by the end of 2005.

- Celent estimates a potential to shift US$17.5 billion in operational and technical costs overseas by 2010, only emphasizing the urgency for financial institutions to incorporate offshoring into their service delivery models.

- Change in financial services mega deals: Traditional outsourcers such as IBM, CSC, and EDS will have to make increasing room for non-traditional offshore vendors – Tower Group

* “The Titans Take Hold”: How offshoring has changed the competitive dynamic for global financial services institutions, May 2004 Deloitte Survey based on responses from 43 financial institutions based in seven countries and included 13 of the top 25 financial institutions in the world by market capitalization
Opportunities

The growth in market size ensures share for all players

- Deloitte Research estimates overall spending on offshoring will increase to $261 billion by 2010. The primary destination for financial services offshoring continues to be India, which receives approximately 80% of all financial services offshoring activity.

- Offshoring isn’t just for tier-one FIs any more. Faced with ongoing IT budget cuts and pressure to manage operating costs, mid-sized (tier-two) insurance and financial services companies are now using offshore services.

Offshoring in financial services is moving to the “NEXT LEVEL”

- Financial institutions will pursue more deals targeted to specific vertical and horizontal IT functions or business processes.

- As offshoring acceptance and experience grows, the types of IT work performed in offshore locations may include a company’s core competencies creating an element of competitive advantage.

- Functional offshoring, which involves business processes, is rapidly gaining momentum. FIs are outsourcing many of their back-office and other operations overseas to cut costs.
Threats

Environment

- Backlash and increased political scrutiny in most countries, against offshoring

- Compliance with the regulations imposed by regulators and rating agencies in the new offshore locations

Customer moves and concerns

- New offshoring strategies, such as captive centers in the financial space

- Intellectual property issues - More than 60 percent of respondents said management of intellectual property is important in the Deloitte survey

Competition

- Outsourcing to US firms with offshoring capabilities.

- Competition from local Indian firms
The pieces are in place to take advantage of the “Next Level” of financial offshoring that would require...

Flawless, secure and cost effective execution

Ability to suggest innovative business solutions

Complete knowledge of the customer and his business

A STRATEGIC PARTNER to clients, focused on delivering enhanced value by offering end-to-end BUSINESS SOLUTIONS LEVERAGING TECHNOLOGY.
R&D outsourcing

Dr. A L Rao
President - Telecom Solutions

12th January, 2005
R&D Services – Opportunity Size

Per cent; '000 of engineers

<table>
<thead>
<tr>
<th>Category</th>
<th>E&amp;D</th>
<th>Systems</th>
<th>Silicon</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>14</td>
<td>206</td>
<td>55</td>
<td>250-300</td>
</tr>
<tr>
<td>Computing &amp; Storage</td>
<td>23</td>
<td>113</td>
<td>90</td>
<td>200-250</td>
</tr>
<tr>
<td>Automotive</td>
<td>60</td>
<td>180</td>
<td>25</td>
<td>200-250</td>
</tr>
<tr>
<td>Industrial Automation</td>
<td>90</td>
<td>75</td>
<td>15</td>
<td>~150</td>
</tr>
<tr>
<td>Aerospace/military</td>
<td>30</td>
<td>40</td>
<td>15</td>
<td>~150</td>
</tr>
<tr>
<td>Consumer electronics</td>
<td>30</td>
<td>40</td>
<td></td>
<td>~100</td>
</tr>
<tr>
<td>Other **</td>
<td>240</td>
<td>45</td>
<td>15</td>
<td>~300</td>
</tr>
</tbody>
</table>

* Includes ~85,000 engineers in Silicon space
** Includes Industrial machinery, metal fabrication, medical equipment, non-electronic office equipment

ABOUT 1.5 - 1.8 MILLION ENGINEERS ARE DEPLOYED IN RELEVANT R&D SERVICES

Constitutes ~65% of total engineering pool

** McKinsey Analysis
Current ‘true’ R&D outsourcing level (without staff augmentation) is fairly low (5-10 per cent)

<table>
<thead>
<tr>
<th>Area</th>
<th>Current level of outsourcing</th>
<th>Per cent of effort</th>
<th>Doesn’t include staff augmentation type work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering services</td>
<td>8 - 10%</td>
<td>&lt;5%</td>
<td></td>
</tr>
<tr>
<td>Embedded software &amp; hardware*</td>
<td>~5%</td>
<td>&lt;5%</td>
<td></td>
</tr>
<tr>
<td>Communications*</td>
<td>~5%</td>
<td>&lt;5%</td>
<td></td>
</tr>
<tr>
<td>Computing platforms*</td>
<td>~10%</td>
<td>&lt;5%</td>
<td></td>
</tr>
<tr>
<td>Silicon space</td>
<td>&lt;5%</td>
<td>~10%</td>
<td></td>
</tr>
<tr>
<td>Packaged software*</td>
<td>&lt;5%</td>
<td>&lt;5%</td>
<td></td>
</tr>
</tbody>
</table>

“Companies are outsourcing primarily in sustenance services... No more than 5% of total R&D would be outsourced currently”

– McKinsey expert

“While OEMs are outsourcing 20% of their manufacturing, they are outsourcing less than 10% of their...”

– Industry analyst

“29% of the US companies with annual sales of over $10 mn and almost 36% of the companies with sales over $50 mn outsource”

– Outsourcing institute

“While OEMs are outsourcing 20% of their manufacturing, they are outsourcing less than 10% of their...”

– Telecom equipment customer

** Source: McKinsey Analysis, Company estimates

About 50-65 thousand design engineers are employed in the product engineering services market in India

Thousands of engineers

- Total product engg. 50 - 65
- 3rd product engg. services 28 - 35
- Captive product engg. services 22 - 30
Outsourcing opportunities across the R&D service chain

Product life cycle (PLC)

- Large portion of core IP
  - Standards based development like Protocol Stacks, EMS, etc
  - Testing and Interoperability
  - IP/Stacks/Components

- Small portion of core IP
  - New feature development
  - Current engineering/sustenance
  - New board/interface development

- Negligible portion of core IP
  - Complete product outsourcing
  - Customer support through the end of the lifecycle
  - Technical Assistance Center

Services

- Product Design
  - Faster time to market
  - Complement in-house expertise

- System Integration and Consulting
  - Help maintain market share through continuous product development
  - Help align costs to reducing margins

- Maintenance
  - Keep costs low
  - Allow internal resources to focus on new product development

- Product Support

Measurable value delivered

- Standards based development
- Interfaces
- Core IP
**Proof points**

- **20+ years** of R&D services experience
- World leader in independent product engineering services
  - 8000+ world class Product engineering workforce
- **15% market share** of outsourced product design services worldwide**
- **33% share** of product design services outsourced to India**
- **One of the world’s largest** independent software verification & validation group in telecom space
- **One of the world’s largest** independent VLSI/system design services group

**Sustained innovation**

- Technology innovation through
  - Centre of Excellence (COEs)
- IP & Component stack across technology/domain areas
- **Strategic outsourcing calculator** for maximizing client benefits
- **3+1 model** of technology transfer which ensures the client an optimized “return of knowledge” during product maintenance phase.
- **EagleVision** – A proven methodology for ASIC & hardware development

**Wipro is the largest global R&D services provider for ‘TRUE’ outsourcing.**

- Mckinsey

**Companies, like Wipro in India, have made a sizable business supporting design services.**

- Gartner, March 2004

**World’s first IT services company to be certified TL 9000.**
Our offerings

Business Divisions

- Telecom Solutions
- Embedded & Product Engineering Solutions
- Enterprise Solutions
- Finance Solutions

Vertical Units

- Wireless Network
- Voice & Next Gen Network
- Broadband
- Optical
- Service Providers

Horizontal Service lines

- Computer Systems & Peripherals
- Consumer Electronics
- Mobile Devices
- Access N/w
- Automotive
- Medical Devices
- Industrial Automation

- VLSI & Hardware Design
- Interoperability Solutions
- Technology Infrastructure Services

E-Business

- Enterprise Application Services (ERP/CRM/SCM/EAI)
- Business Intelligence/Data Warehousing

Wipro BPO (Call Center, Product Support & Back-office Transactions)
Focused Industry Segments - Telecom

**Whom we Serve**

- Product engineering services
- Independent verification and validation
- Board/ASIC design services
- Software stacks and design frameworks

**Network equipment**
- Wireless infrastructure
- Enterprise Voice
- Carrier Voice & IN Network
- Broadband Access
- Routing & switching
- Optical Ethernet & NG Sonet
- Telecom Security
- IMS / SDP

**Terminal / mobile devices**
- Device development & verification services
- Device application services
- Network conformance and Interoperability

**Service provider**
- System integration (OSS / BSS solutions)
- Application development and maintenance services
- Enterprise infrastructure management services
- Business process outsourcing services

**Focused Industry Segments**
- Seris60 and Symbian based handset development
- Mobile MMI and UI toolkit development for WCDMA
- Linux phone development
- Mobile MMI development using BREW
- GSM/GPRS/WCDMA/CDMA testing for mobile handsets
Focused Industry Segments - Embedded

Computing/Storage/Peripherals
- Computers/ servers
- Printer driver / firmware
- Scanners
- MFP
- Migration services
- OS engineering
- Software products
- Storage virtualization
- Fibre channel and SAN
- IP storage
- RAID systems
- NAS systems
- Storage network management

Semiconductors
- C Modeling, Pre and Post silicon Validation, SoC Designs
- Hardware abstraction layers, Diagnostics
- Device Drivers, RTOS Porting
- Complete Reference Designs

Automotive electronics
- Driver information systems
- Multimedia reference platforms
- Navigation systems
- Instrument clusters
- Telematics applications
- Body electronics
- Electronic power assisted steering

Industrial automation & avionics
- SCADA/HMI
- PLC
- System integration
- Firmware development
- Software tools

Consumer electronics
- Set top box
- Digital TV
- Residential gateway
- Media Center
- Security camera
- Portable Media Player

Medical devices
- Diagnostic imaging
- Product realization
- Value engineering
- Data acquisition
- Connectivity solutions
**R&D BUSINESS PERFORMANCE**

### Telecom & Inter-Networking
(Telecom Equipment Manufacturers)

- **YoY growth – 42%**

<table>
<thead>
<tr>
<th>Quarter ending</th>
<th>Revenue ($ M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 2003</td>
<td>39</td>
</tr>
<tr>
<td>Sep 2004</td>
<td>50</td>
</tr>
<tr>
<td>Dec 2004</td>
<td>55</td>
</tr>
</tbody>
</table>

### Embedded Systems & Product Engineering

- **YoY growth – 33%**

<table>
<thead>
<tr>
<th>Quarter ending</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Dec 2003</td>
<td>33</td>
</tr>
<tr>
<td>Sep 2004</td>
<td>42</td>
</tr>
<tr>
<td>Dec 2004</td>
<td>44</td>
</tr>
</tbody>
</table>

### Telecom Service Provider

- **YoY growth – 63%**

<table>
<thead>
<tr>
<th>Quarter ending</th>
<th>Revenue ($ M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 2003</td>
<td>9</td>
</tr>
<tr>
<td>Sep 2004</td>
<td>15</td>
</tr>
<tr>
<td>Dec 2004</td>
<td>15</td>
</tr>
</tbody>
</table>
Our value proposition

**Thought leadership**
- Industry understanding
  - 2 decades of experience
  - Product strategy & architecture
- Intellectual property blocks
  - WLAN, H264, 1394, USB
- Solutions
  - Telematics, Linux based Mobile framework, video-over-wireless, Set-top box

**Aggregator benefits**
- Presence across various stages of the product life cycle
  - Transfer the ‘development’ edge of doing 500 projects a year to customers
- Full spectrum
  - Multiple services: software, hardware, verification, system integration, etc.
- Multiple domains, multiple customer segments

**Instant organization**
- Rapid changes to size of team (up and/or down)
- No negative consequences to changing size of team
- Global delivery model

**Safe hands**
- Physically separate ODC’s
- Financial stability of partner
- Quality certifications & expertise
  - People management expertise – PCMMI
- Disaster management – infrastructure etc

**Realize new products faster**

**Maintain existing products efficiently**

**Localize existing products for new markets**

1  2  3

Aim to be among the most preferred partner to clients worldwide
Wipro’s Differentiated Services
An overview

Sanjay Joshi

25th February, 2005
Our differentiated Services

1. Business Process Outsourcing
2. Technology Infrastructure Services
3. Testing Services
4. IT Architecting & Consulting
Business Process Outsourcing – The India advantage

- 40%-60% cost reduction for offshored process
- Differential in wages from the US or UK parent location at approx 70%-80%.
- Purchasing Power Parity - the reason for cost savings likely to exist for next 20-30 years

- Established methodologies and processes being rapidly adopted for better performance
- Well defined quantifiable metrics for quality and process
- Access to highly qualified – skilled pool

Faster turnaround time
- Time zone difference
- 24X7 service
- Learning curve effect, given increased activity across companies and increased centralization within company

Opportunity for leveraging capabilities from remote location

Source: Mckinsey
Wipro’s Business Process Outsourcing

- Among largest third party BPO service provider in India
- Base of 23 active clients and 85 processes
- Voice based business generated 86.5% of Revenues
- Demonstrated track record of Revenue growth & profitability
- Clients are broad based across diverse industries like Computing, Financial Services, Retail, Telecom Service Provider etc.
Benefits over the entire relationship lifecycle

- **Wave 1**: Transition
- **Wave 2**: Increasing customer value
- **Wave 3**: Process re-engineering, Process optimization, Cost savings & process standardization

**Customer value**

**Process**
- Test processes, prove concept
- Maintain quality
- Initial cost savings through arbitrage

**Process + applications**
- Process improvement using Six Sigma and domain expertise
- Knowledge management
- Evaluate technology, automation & consolidation options

**Process + applications + infrastructure**
- Best in class – process and technology optimization
- Consolidation across operations / processes
- Maximize savings through better turn-around and reduced defect rates
Case Study - Underwriting & funding review – consumer direct lender (US)

The client
The client is a consumer direct lender dedicated to providing borrowers across the credit spectrum with a more enjoyable and affordable way to obtain mortgage, auto and home equity loans.

The challenges
- High operational costs of running the process in house
- Client strongly felt the need to utilize a 24x7 business model and reduce cycle time for closing of loans

Wipro solution
- The clients operations are managed out of our Chennai location which boasts of high quality talent pool with expertise in the financial domain
- The offshore team consists of senior underwriters to supervise the process
- Wipro was able to provide quick ramp up of the process.

Business benefits
- The time zone difference allows our client a faster cycle time to close the loans
- Better customer acquisition and retention performance
- The client has been able to realize the cost savings of process consolidation by merging globally repetitive processes across US, UK and Canada
- 60% savings on cost

- 90% of client’s customers have opted for India
- 60% savings of client’s costs
Technology Infrastructure Services – evolving landscape

Addressing a $90 b opportunity
Wipro’s Technology Infrastructure Services

- More than 140+ customers across the globe and over 550 customers in India for Infrastructure Support Services
- Largest offshore IT Infrastructure Service provider in terms of revenue, people and customers
- Industry expert skills, over 5000 technical specialists
- World’s first BS 15000 certified facility
- Backed by leading technology vendors and our experience of over two decades
Using a distributed global delivery model

Ensuring 99.95% availability of IT infrastructure spread across 118 locations in Europe by delivering remote monitoring and management services from the Global Command Center (GCC) in Bangalore

- **Architecture**
  - NOC locations in U.S and U.K
  - POP locations in U.S, U.K and Japan
  - GCC in Bangalore, India
  - GCC – BS15000 certified site

- **Services from GCC**
  - Monitoring
  - Administration
  - Diagnostics
  - Trend based consulting
  - Elements covered: Servers, network, OS, databases, applications, storage and security

- **Benefits delivered**
  - Proactive 24X7X365 support
  - Industry expert skills
  - Proven process oriented service operations
  - Scalable architecture
  - Redundant, fail-proof architecture
Case Study - Large oil & gas major

Scope
- Client services
- Server support
- Messaging and active directory
- Secure access
- Problem co-ordination

Infrastructure
- 90,000 users
- 2470 file servers
- 97,000 mail boxes and 150 mail servers
- Messaging, AD and secure access for 120,000 users

Geographical spread
- Europe (UK & Continental Europe)
- America (North, Central, Latin)
- Middle East & Africa

Production environment support
- Wipro’s second line technical support (offshore)
- Problem Coordination
- Non-Break fix support
- Situation Management
- On-Boarding New services
- System Administration
- Reactive Support
- User Training
- Break fix support
- Remote client services
Wipro’s Testing Services

- 8 years of experience in the independent testing services
- Largest offshore testing service provider in terms of revenue, people and customers
- End-to-end testing services offered for all industry verticals
- Strategic alliances with leading testing tools vendors: Mercury, Rational, Compuware, TestQuest, Telelogic
- Testing as Managed Services (TMS) for end-to-end testing ownership through our Global Delivery Model of Onsite, Offshore, Near-shore and Remote Testing
- Ready-to-use Point Solutions, Frameworks and industry specific Centers of Excellence (CoE)
## Our Service Portfolio

### Test process consultancy
- Understanding Customer environment
- QA process implementation
- Test tools and platform recommendation
- Communication and rollout of plans

### Manual testing
- Design
- Scoping
- Execution
- Maintenance

### Life cycle testing
- Module
- Integration
- Regression
- Acceptance

### Specialized testing
- Automation
- Localization
- Performance testing
- Pre-certification

### Remote testing
- Scoping
- Environment setup
- Remote execution and collation of results
- Maintenance

### Testing as Managed Service (TMS)
- Partnership objectives sign off
- Knowledge acquisition
- Offshore test environment setup
- Complete transition
- Continuous improvement
### Wipro advantage

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 1 | Domain specific skill sets available across all industry domains blended with the best-of-breed test processes, methodologies and frameworks.  
|   | Existing relationships with global leaders in testing tools. |
| 2 | 8 years of experience in testing services including setting up dedicated test labs for customers and using our Global Delivery Model of Onsite, offshore, Near-shore and Remote Testing.  
|   | Understand the challenges of managing an offshore center. |
| 3 | The Software Test Diagnosis Model (STDM) was developed based on knowledge and experience in independent verification and validation.  
|   | Test processes models developed for Automaton, Remote testing and Performance testing. |
| 4 | Continuous Improvement using Six Sigma Projects.  
|   | Specific Problem Solving Frameworks:  
|   |   - Orthogonal Array Technique  
|   |   - Field Error Prediction  
|   |   - Lean Management for Waste Reduction. |
| 5 | Ability to ramp up quickly in terms of location and people as per our Global Delivery Model of Onsite, offshore, Near-shore and Remote Testing services. |
| 6 | Offshore delivery ensuring up to 30% ongoing savings due to process and quality improvements. |
Case Study

Client profile
A leading Wall street Investment Bank

Challenges facing the client
- Lack of a common organizational wide platform to ensure QA of IT initiatives
- To streamline testing efforts within organization and establish a QA cell
  - Frequent changes of requirements
  - Inadequate business application documentation
  - Lack of clear milestones for QA process.
  - Communication gap between development & QA team

Wipro solution
- Implemented Centralized QA process - ensured all business requirements are documented
- Defined and implemented a QA process with clear identification of role of development teams with respect to the QA cell
- Created several client specific artifacts and document templates to help them adopt the QA process with ease
- Rollout to all stakeholders for the need to change the process

Business benefits
- 60% of the test cases were automated
- 100% test execution and coordination from offshore
- Reduced the test cycle from 13 hours to 4.5 hours in some specific applications
IT Architecting & Consulting Services

- **Business focused consulting**
  Acquisition of AMS energy division and Nervewire provide critical domain expertise

- **Process consulting** group for continuous business process improvement

- **Technology consulting** group to help align IT with business needs

- **Cross-Industry Services**
  - Business consulting
    - Organizational re-alignment
    - Managing operational risk
    - Outsourcing consulting
    - Change management
  - Process consulting
    - Business process improvement
    - Process re-engineering
    - Six Sigma consulting
    - CMM/CMMI gap analysis
  - Technology consulting
    - Aligning IT to business strategy
    - Package/technology assessment
    - System integration
    - Architecture and designing
    - Technology visioning

- **200+ member enterprise architecture consulting** group to help align IT with business needs
Case Study

The client
A leading North America based food distribution company

The challenges
- High operational costs due to poor forecasting
- Consequent implications for Revenue predictability and inventory management

Wipro solution
- Wipro’s consulting team along with technology and domain teams designed a restructured business process
- Solution also included identification of and recommendations for IT architecture & applications
- Wipro was able to provide quick ramp up of the process.

Business benefits - Customer
- Improved forecasting and better Revenue management
- Higher efficiency
- Significant savings on cost

Business benefits - Wipro
- Significant follow through engagement in the areas of Data Warehousing, Business Intelligence and Application Integration
- Established strategic credibility with the customer organization
Benefits as seen by our customers

- One stop shop for all IT Services needs
- Benefits much more than just cost savings
- Significantly higher quality of service with predictive delivery
- Remote service delivery, monitoring and management and testing – ALWAYS ON service
- Proactive support – a different end user experience
- Flexible model of outsourcing
- Access to best –of-breed process frameworks and talent

Thank You
Thank you for your time

Our promise
With utmost respect to Human Values, we promise to serve our customers with Integrity, through Innovative, Value for Money solutions, by Applying Thought, day after day.