GIS Solutions for Business Enterprises

Manideep Saha
General Manager – Intergraph SG&I India
Today’s Mantra for Business Enterprises to Sustain & Grow

Maximize Revenue
- Locate & profile customer base
- Understand Competitor Coverage
- Geo specific insights for effective campaigns

Minimize Cost
- Map critical assets for efficient management
- Pinpoint problem areas
- Effectively deploy resources: When they are needed Where

ALL OF THESE HAVE ONE COMMON THING: GEOGRAPHIC LOCATION
Market Pressures

- Safety, Reliability
- Regulatory Compliance
- Aging Infrastructure
- Process Improvement
- Integration, Interoperability

Price of products and services decrease

- Customer Expectations
- Competition
- Customer Choice
- Business Drivers

Cost of operations continue to increase
A GIS System Has Cost/Benefit Ratio of 1:1
If Used To Automate Planning & Engineering Cost/Benefit Doubles to 2:1
If Create Common Database, Integrate & Provide Data to Enterprise Cost/Benefit Goes To 4:1
If Expand Network Model To Network Operations Cost/Benefit Ratio Goes Beyond Known Studies
Current Industry Trends...

End-to-end GIS lifecycle management for Business Enterprises needs:

- Job Management/Versioning
- Design & Change Management
- Design Analysis & Optimization
- Landbase Creation & Maintenance
- Service Analysis & Marketing
- Mobile Support for Operations & Maintenance
- Executive Analysis
- Report & Plot Generation
- Enterprise Integration
Integrating GIS with other delivery systems is essential to
Staying competitive
Providing significant benefits
Maximizing your return on investment
Improved productivity
  – Enterprise system integration, improved work flows, improved user interfaces, data reliability, high performance, scalable

Better data
  – Data reliability, improved validation tools, data integration, real time data, improved crew safety

Improved data access
  – Open data, enterprise data integration, web enabled, centralised data and rules, real-time data

Reduced development & maintenance costs
  – Industry applications, configuration complemented with robust APIs, integration platform, standard Microsoft development environment (Oracle and Microsoft), reduced reliance on GIS vendor
Understanding the ROI Curve

Let's Start Here

Exponential

~2:1

Let's Start Here

~1:1

GIS / Mapping

Design/Analysis

Enterprise Access

Enterprise Operations

Application of Network Model

 Benefit/Cost Factor

0 5 10 15 20 25

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One area of cost improvement with a fully-integrated graphical workorder design solution is in generalized capture costs per customer. *keeping in mind that cost is dependent on source materials, density, and other unique factors.*

<table>
<thead>
<tr>
<th>Benefits (in U.S. dollars)</th>
<th>Annual</th>
<th>Four Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elimination of Drafting Costs</td>
<td>$1.2M</td>
<td>$4.8M</td>
</tr>
<tr>
<td>Thematic Mapping</td>
<td>$1.0M</td>
<td>$4.0M</td>
</tr>
<tr>
<td>Reduction in Design Costs</td>
<td>$1.0M</td>
<td>$4.0M</td>
</tr>
<tr>
<td>Outage/Customer Notification</td>
<td>$200K</td>
<td>$800K</td>
</tr>
<tr>
<td>Model for Engineering Analysis</td>
<td>$300K</td>
<td>$1.2M</td>
</tr>
<tr>
<td>Engineering and O&amp;M Functionality</td>
<td>$1.2M</td>
<td>$4.8M</td>
</tr>
<tr>
<td>Implementation in an Acquired Foreign Company (one-time benefit)</td>
<td>$5.0M</td>
<td>$5.0M</td>
</tr>
<tr>
<td><strong>Four Year Total Benefits (in U.S. dollars)</strong></td>
<td></td>
<td><strong>$24.6M</strong></td>
</tr>
</tbody>
</table>
“Geospatial system provided 50-60% increase in labor efficiency & savings.”
“Engineers save 10% of time finding correct information.”
“Geospatial solution is no longer fashionable but a survival kit”
“Average project estimation time reduced from 24 hours to 24 minutes.”
“Reduced Average Job Design Times From 2-3 Weeks To 2-3 Days.”
“Calculated 75% Reduction In Overall Planning Work Effort.”
“Achieved ROI within 2 years (> 10 Mil. US$)”
Benefit/Cost Factor

~4:1

Understanding the ROI Curve

Exponential

Now let’s move to here

Application of Network Model

GIS / Mapping
Design/Analysis
Enterprise Access
Enterprise Operations

~1:1
~2:1
~4:1
City of Hamilton, Canada

Requirement
Provide Field Crews with Current Accurate information
Provide new searching, tracing and field update capabilities
Replace map books with digital information

Benefits
Elimination of Map Book production costs
Crews now have access to current data
Crews can collect redlines and asset information for update of corporate database
Understanding the ROI Curve

Application of Network Model

- GIS / Mapping: ~1:1
- Design/Analysis: ~2:1
- Enterprise Access: ~4:1
- Enterprise Operations: Further Up The Curve

Exponential Growth

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Requirements

Efficient Critical Infrastructure Protection
Geo-Location & Identification of Infrastructure
  – Electric
  – Environmental
  – Public
  – Businesses, banks, hospitals,
Related Location Information and spatial filters
Real-time access to information
Location awareness for Response units
Leverage spatial and location data in one CIP environment

Benefits

Speed of decision making greatly enhanced
Response strategy identified quickly
Real-time adjustment of response resources
Integration disparate data types quickly and efficiently
Situation update is instant
Damage Assessment For Reimbursement
What Are The Key & Most Critical Infrastructure?
Immeasurable

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Benefit/Cost Factor

Exponential

~4:1

It Get’s Even Better

~2:1

~1:1

Application of Network Model

GIS / Mapping
Design/Analysis
Enterprise Access
Enterprise Operations

0 5 10 15 20 25

Benefit/Cost Factor

Exponential
- Effective, customer focused restoration planning
- Faster determination of dispatch destinations
- Revenue increase
- Improved customer satisfaction
Requirement
Provide reliable electricity to 1 million customers in 6 regions & 243 municipalities
Address new Reliability Index regulations
Implement AM/FM/GIS, Outage Analysis, Dispatch

Benefits
Met & exceeded regulatory goals
Lowered maintenance costs
Improved network performance
Reduced outage durations
Six operations centers reduced to one
Before...
After...

Priceless!
Understanding the ROI Curve

Benefit/Cost Factor

- Exponential ~4:1
- Off The Curve!

Application of Network Model

- GIS / Mapping ~1:1
- Design/Analysis ~2:1
- Enterprise Access ~4:1
- Enterprise Operations

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We’re Way Beyond GIS!
Some other Application Areas

Retail / FMCG Product Chains:
- Site Selection for New and Relocated Branches
- Branch Closure Evaluation
- Merger and Acquisition Evaluation.

Banking & Financial Sector:
- Demographic and Geographic segmentation for Branch & ATM Location
- Fraud / Crime Mapping
- Insurance underwriting & Risk Analysis etc.

Real Estate:
- Land acquisition
- Trade Area Analysis
- Supply and demand valuation
- Progress monitoring etc.

Travel & Tourism:
- GIS based visualization of tourist sites
- Route planning
- Map based query on accommodation, cultural events, nearby attractions
- Geo based marketing & promotions
GIS is an enabling technology, not an end in itself
We must stop being GIS-centric, and extend ourselves to become Utility GIS application and enterprise-centric
Geospatial projects must prove ROI in fight for funds
Benefits increase as we expose data to enterprise
The broader the solution, the greater the benefits
Leading global provider of engineering and geospatial software that enables our customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure.

Technology innovator since 1969; more than 4,000 employees worldwide.

Businesses and governments in 80 percent of the world’s largest countries rely on our industry-specific software.
Intergraph’s SG&I division delivers geospatial and incident software solutions that help you manage, enhance, and protect life, infrastructure, and property.

ERDAS, Leica Photogrammetry and GeoMedia desktop and enterprise solutions are now part of Intergraph’s SG&I geospatial business unit.

SG&I takes geospatial and incident management information, and the context it provides, and creates:

- A firm foundation for cooperation and interoperability.
- Modern, comprehensive, well-integrated set of geospatial capabilities.
- Analytics that help you see the information hidden within your data.

**SG&I’s solutions benefit the following industry sectors:**
Thank You