The Strategy of LGGI and future directions towards Enterprise Products and Solution
Overview and Update
Geosystems Poland User Group Meeting – June 15, 2007
Dr. Thomas Bayer, Director Sales Europe & CIS
Topics

Hexagon Overview
LGGI Overview
LGGI Strategy
Acquisition Progress
Hexagon Overview.....
Facts & Figures

Global technology group with strong market positions
- Hexagon Measurement Technologies
- Hexagon Polymers
- Hexagon Engineering

Headquarters in Stockholm, Sweden
Net sales ~ 13 500 MSEK (~$2 billion)
Sales to > 100 geographical markets
> 8200 employees in 30 countries
Public - 75% Swedish shareholders
Ca. 10% of sales invested in R&D!
# Business Targets

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<th>Operational</th>
<th>Financial</th>
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<td>▪ Being no. 1 or no. 2</td>
<td>▪ EPS growth of at least 15% P.A.</td>
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<td>▪ Having the long term cost leadership in the industry</td>
<td>▪ Equity ratio between 25 and 35%</td>
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<td>▪ Being the innovator</td>
<td>▪ Positive cash flow over a business cycle</td>
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<td>▪ Having the industry's best management</td>
<td>▪ ROCE 15% over the cycle</td>
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<td>▪ Speed Management</td>
<td><strong>Restriction</strong></td>
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<td>▪ Net Debt / EBITDA &lt; 3.5</td>
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Group Management

Ola Rollén
CEO and President
President of Hexagon Measurement Technologies

Hans Carlsson
President of Hexagon Engineering

Håkan Halén
Chief Financial Officer

Lars Olofsson
President of Hexagon Polymers

Gert Viebke
Vice President of Strategy
Hexagon Measurement Technologies

Range

MACRO

< 10 Meters

MICRO

< 100 µm

NANO

< 0.3 µm

Accuracy

Market Size: 60,000 MSEK
Hexagon Share: 15%
= 69% of Total Revenue

< 100 µm

< 0.3 µm

- when it has to be right

Leica
Geosystems
Measurement Technologies – Macro
LGGI Overview.....
Leica Geosystems Geospatial Imaging

Headquarters in Atlanta, Georgia USA – ~ 210 employees

Annual Revenue – ~ $50M

We Develop, Sell and Support software for Geospatial Imaging Information through direct sales and partners

>40,000 licenses worldwide
Employee Base

Sales, Support & Marketing ~ 100

Product Management ~ 10

Development ~ 80

Finance & Operations ~ 15

Administrative ~ 5
Employee Locations

- Atlanta
- Denver
- Heerbrugg
- Singapore
- Brisbane
- Beijing
- Tokyo
- Alexandria
- Bonn
- Woking
- Sydney
- Perth
- Woking
- San Diego
- Alexandria
- Bonn
- Heerbrugg
- Beijing
- Hyderabad
- Singapore
- Perth
- Brisbane

Development Center
- Sales & Support
- Minority Partners
LGGI Strategy Review.....
Enterprise – Industry Direction

Shift from desktop to the geo-web (web services)
Increasing use of Open Source (PostGIS, UMN Map Server, uDig)
OGC & ISO Geospatial Standards for interoperability
IT centralization of software hosting, data management, spatial processing and delivery of content
Low cost & publicly available data
Platforms being built on Service Oriented Architecture (SOA)
Spatially Enabled Databases (Oracle, Microsoft, IBM)
Increasing presence of online geospatial portals (Google, Microsoft, GlobeXplorer)
LINUX
Security and Authentication Systems
What Will the Enterprise Platform Do?

The Enterprise Platform will be the system that:

- **Feeds** an organization with fresh content from a variety of sensors
- **Analyzes** spatial and non-spatial content within the organization to make decisions
- **Visualizes** the organization in order to create visual information products
- **Shares** the enterprise with internal and external customers
The Enterprise Architecture

A scalable, portable enterprise architecture on which to build future enterprise products.

- **Enterprise** – It must be able to be easily integrated into the business processes of a large organization. This mean the software must be vary layered in its construction and separate the data model from its persistence. It must also allow be based already well established standards (J2EE, .NET, OGC, etc). Frameworks such as J2EE provide enterprise and Web integration.

- **Scalable** – The architecture must allow for its components to run on handheld machines as well as massively parallel GRID computing systems.

- **Portable** – It must not make a presumption about a particular platform. Linux is strong in the server market and is gaining in the desktop.

- **Easy to develop** – It must be built with tools that are easy to use that promote robust software construction.
Scaling from Handhelds to Servers

J2EE
(Secure, Scalable, Transactional, Compatible, Standards Based, Collaborative)

Storage Area Network (SAN) Imagery
RAID Array Imagery RAW
RAID Array Imagery Processed
Oracle Spatial DB
ESRI GDB
Brassletch Application Store
Growth strategy

2007

- Grow #1 position in IMAGING
  - Maintain a clear leadership role in image exploitation and factory processing for photogrammetry – building better technology for Desktop, Web, Client-Server architecture
  - Grow market share staying ahead of the competition – target 2X revenue growth with sustainable 15% EBIT

2009

Top Player

- Move into a leading position in the geospatial SW market, developing and extending our platform into select verticals with COTS and Services
- Grow organically and through major acquisitions – target 4X revenue growth with growing EBIT
Identifying acquisition / partnering targets

- **Portals**: Use available portals
- **Verticals**: Support opportunistically with Solutions and Services
- **Integration**: Customizing / Integration Services (strengthen regional Services)
- **Platform**: Prepare transition to client – server (Brunswick development)
- **Technology**: Vector handling and topological editing
  - Improve change detection
  - Lead in Change Detection – add automated feature extraction
  - Improve hyper-spectral and radar processing
  - Improve presentation with “new” cartographic tools
- **IT**: Continue Partnership with Oracle, ESRI, …
- **DB**: Partner with data providers (e.g. Digital Globe, GeoEye, …)
- **Content**: Provide Data Factory
Acquisition progress...
• Completed acquisition April 1, 2007
• Announced publicly on May 7, 2007
Strategic rationale for acquisition

• Adds Vector editing and topology handling to LGGI’s Enterprise System

• Provides Platform (ADE) to build spatial applications for users who are using Oracle Spatial

• Access to new customer base, mostly in US federal, state and utility

• Adds to LGGI
  – Specific Oracle Spatial and DB expertise
  – J2EE expertise
  – “Service” and implementation experience for enterprise systems
Anticipated synergies

• **Technology**
  - Vector handling and topological editing are key components to a fully deployed Enterprise solution set
  - Java/J2EE expertise
  - Database and data management expertise
  - Mobile client deployment

• **Enterprise Implementation**
  - Seeds our IT solution implementation ability (a skill set we are currently limited in)
  - Certified Oracle Spatial training and support

• **Market Access**
  - Opens access to Oracle install base with geospatial requirements
  - Opens non-traditional markets in business intelligence and mobile data mgmt
Leica ADE Architecture why Oracle

Oracle add spatial capabilities to the database

ADE add real-time data editing, scaled in a web environment

Data is updated at the source

Transaction management is database driven

Analysis functions can encompass Spatial and business data

Oracle™ MapViewer

SDOVIS (rendering engine)

Web Browser (ADE Applet)

HTTP

JDBC

Oracle™ Database

Client

Mid-tier

Database
Leica ADE Enterprise suite

**Leica ADE Enterprise**
Interactive web-applications
enables real time data editing of spatial and non spatial data in a thin client.

**Leica ADE Remote**
Field force enabled interactive data editor
enables connected, disconnected or occasionally disconnected editing

**Leica ADE Mobile**
Real time interactive mobile applications
enables connected, disconnected or occasionally disconnected editing

Oracle Spatial Expertise & Solutions Development Services
Manage ALL Data Using:
Web, Online or Offline Interfaces
Enterprise Attribute Data is COMPLETELY Integrated with Location Data

Search for location based on attribute data...out-of-the-box!
Enterprise Attribute Data is COMPLETELY Integrated with Location Data
Powering Geospatial Imaging

LGGI and ER Mapper
building a powerhouse together

- when it has to be right
What ER Mapper brings to LGGI
powering geospatial imaging

• World-class, high performance image serving solutions
• Leading edge image compression technology
• Exceptional people and knowledge
• Strength in the mining and extractive markets
• Strong foothold and performance in Southeast Asia
• 50 employees worldwide
Synergies that deliver powering geospatial imaging

- Stronger global enterprise – Asia Pacific, Americas, Europe, India, Middle East, Africa
- Enhanced products and enterprise services in discovery, cataloging and delivery of geospatial imagery
- Expanded corporate and personal opportunities for growth
- Proven commitment to investing in R&D
- 250+ geospatial information experts in one company
- Management team with broad experience in geospatial information industry

1 + 1 = 3
Advancing Enterprise Development

Distribution / Services: ERMapper and Partners

Geospatial Platform for 3rd Party Development

- Web Services (WMS, WFS, WCS)
- Geospatial Processing Engines
- Catalog
- Vector Editing & Topology
- Visualization & Delivery (TITAN & LVE)
- Vector Geometry (GeoServer)

Client

- Production RS/Photo (IMAGINE & LPS)
- 4D Client (Eclipse & UDig)
- Web Client (HTML)
- Mobile Client

Server

- Partners
- LGGI
- LGGI & Partners
- Acquis
- LGGI & ERMapper

Database

- Spatial Database PostGIS
- Oracle Etc.

Acquisitions

- Partners

- when it has to be right

Leica Geosystems
Questions?