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German Air Surveys

PROJECT MANAGEMENT OF INTERNATIONAL ENGINEERING PROJECTS

by
Ralf W. Schroth



Dr. Ralf Schroth
March, 11.10.2008

International Project Management

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Globalization

- Outsourcing

BusinessWeek online
Outsourcing Innovation
First came manufacturing. Now companies are farming out R&D to cut costs and get new products to market faster. Are they going too far?
- Mergers and Acquisitions

EL BLOG SALMÓN
comunicación y formación en el sector cultural

EON hace una OPA por Endesa: llegó la caballería

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Globalization

- Private Equity Companies

Intergraph Announces Agreement to be Acquired by an Investor Group Led by Hellman & Friedman and Texas Pacific Group
Stockholders to Receive \$44.00 in Cash per Share; Transaction Valued at Approximately \$1.3 Billion
- Venture Capital Companies

EBay to buy Skype in \$2.6bn deal
Online auction site eBay has agreed to buy internet telephone company Skype Technologies in a \$2.6bn (£1.4bn) deal.



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Globalization

- Emerging Markets

Indische Börse nach Gipfelsturm nicht mehr günstig



Dank einer Kursverdreifung glänzt die indische Börse mit einem imposanten Aufwärtstrend. Für das Land spricht zudem die konjunkturelle Dynamik. Doch zunehmend stört die inzwischen sehr anspruchsvolle Bewertung.

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Overview

1. Introduction and Motivation
2. Project Phases
3. Tendering Process
4. Project Realization
5. Examples

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Introduction

Driving factors of the Geomatic Industries

Technological trends:

- high resolution satellites
- digital airborne cameras
- LiDAR / Radar etc.
- GNSS
- sophisticated GIS
- web technologies

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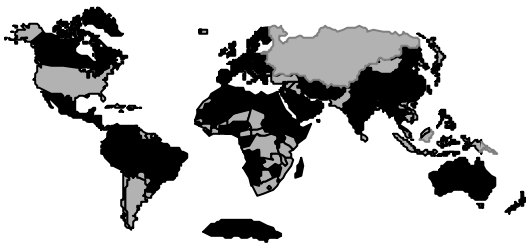
Driving factors of the Geomatic Industries

Political and marketing trends

- spatial data infrastructure
- new economic cadastral systems
- homeland security
- Google Earth
- deregulation of markets
- growing pressure on prices and quality
- increasing transparency and comparability of products and services

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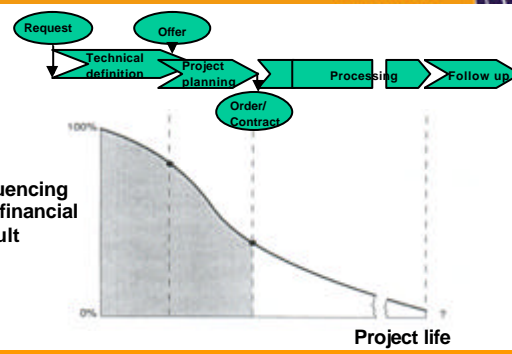
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Engineering and surveying projects can be separated in

- Pre-project phase
- Processing phase
- Post-project phase

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Influencing the financial result

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Tendering processes are depending on

- financing partners
- legal and economic regulations
- security aspects

Pre-qualification phases (long / short list)

- evaluation of suppliers
- technical capacities and experiences
- financial capacities

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Evaluation of

- technical offer
Description of work process and proof of special capacities and capabilities
- financial offer
Prices per item, bill of quantity

Protected markets

- local tax registrations
- local content conditions
- local registration at chambers

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On-line Bidding **“new”**

pre-qualification phase
tendering process via internet

vendors have the opportunity to adjust their prices and getting information about competitors

vendor: more transparency
ease of participation
opportunity to rebid

buyer: efficient process
competitive price

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Risk evaluation for tendering phase is part of the enterprise risk management

Risk factors:

- Taxation regulations
- Local content conditions
- Solvency of the client
- Currency of contract
- Commission fees
- Penalties
- Bonds
- Payment conditions
- etc.

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Evaluation of risk factors leads to the Go / Nogo decision by the management

Go on means capitalizing the risk factors as add-on to the calculated prices of the technical project design phase

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Conglomerates, but also small and medium enterprises can manage nowadays their economic grows only by expansion to foreign markets.

Acting in international markets means:

- High level of risks
- Skilled personnel for project management

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Project processing phase starts
Project management has to be established
Project adopted organizational structures

PM needs

- project management theory / tools
- general management know-how
- knowledge specific to the product or services
- social and communicative skills
- frankness and open mindedness for unknown things
- sensibility in the intercultural field
- great personal flexibility
- readiness for unconventional conflict solutions

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Running Projects		
Project No.		
Risk type		
Risk sub-type		
Responsibility		
Risk class		
Reporting to		
Action/Status		
Priority		
Recommendations		
Acting person		
Date		
Supervision		

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Client Motivation:

1. Topographical and utility map data of approx. 100 sq.km are seriously outdated (last survey was in 1986)
2. Typical development projects are occurring in previously undeveloped (or underdeveloped) areas that lack information
3. Planning Section, Utility Section and Land Section require up-to-date geospatial data to issue their official certificates

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**Base Survey Data Revision Phase
Stage 1 Status Chart**

■ Plotting Completed
■ Field Verification / Survey Completed
■ Data Integration / Queries Completed
■ Major Developments Updated

254 map sheets 1:1,000

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Updated vs. Original data

Area	Original Data	Updated Data
1	~90	~10
2	~85	~15
3	~80	~20
4	~75	~25

Area	Ground Survey	Aerial Survey
1	36	64
2	51	48
3	71	28
4	62	38

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Length (km):	2.300
Number of geodetic datum points:	3
Absolute accuracy (cm):	< +/-10
Relative accuracy (mm):	< +/-5
Number of border points:	1.317
Number of maps:	508
Number of images:	16.491
Project volume	1.150 Mio.US\$

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