

Auriga:

Providing High-Value Services for Software and High-Tech Product Companies

Overview



Elite Software R&D Services
Since 1990

Importance of Complete High-Value Solution

- **Driving factors**

- competitive pressure
- increasing consumer demands
- rapidly changing fashion

- **Most influenced industries**

- Software
- Consumer electronics
- Automotive
- Medical electronics

- **Resulting needs**

- Innovation: Gather ideas and concepts all over the world
 - Best experts: Create a greater bandwidth of skills and expertise by going global
 - Reduced cost: Use lower-cost locations
 - Short TTM: Use engineering experts with lots of experience in organizing product development
-
- **Bottom-line: need to outsource engineering as a business process**

- **Product Engineering Service = Engineering BPO**

- \$2.3 billion in 2004, \$8-11 billion by 2008 [*Nasscom estimates*]



What Is Needed from Providers

- **360° offering of all services required for product success**
 - Conceptualization and prototyping
 - Design and development
 - Complete product QA – from strategy to test execution
 - Maintenance and extension
 - Installation and configuration
 - Customization and integration
 - Level 1,2,3 support
- **360° support for all parts of the picture**
 - COTS product / framework
 - Custom solutions
 - Build / test / deployment tools, frameworks, servers and subnets
- **Intellectual Property protection**
- **Satisfaction of common needs**
 - **Quality**: make provider responsible for it
 - **Management overhead**: avoid micro-management
 - **Engineering overhead**: avoid creating tons of specs
 - etc...
 - **Responsibility**: let problems be provider's headache
 - **Performance**: use efficient process
 - **Risks**: share with provider



Additional Needs: High-Tech/Software Area

Knowledge

- Ownership of IP and specific knowledge in software area
- Legal & tech IP protection, visibility into team activities, trust & cultural match
- Knowledge transfer & mgmt

Process

- Existing engineering team used to certain process & tools
- Process flexibility, tailoring capab's
- Integration readiness: tools & repositories
- Intensive communications

Requirements

- Continuously changing market needs, detailing on the fly
- Agile/flex process supporting frequent changes to reqs
- Resource allocation flexibility
- No lengthy (legal/exec approval) procedures for changing the course

Time

- High pressure from competitors demanding low TTM
- Short project ramp-up time
- Inter-project knowledge preservation
- Direct communication channels
- Short tactical decision-making cycle, delegating responsibilities to the team



Auriga's Solution: At a Glance

Safety

- **U.S. corporation, recognized, well established, financially stable**
 - Forrester, Gartner, AMR Research, Ernst&Young, IDC recognize Auriga as one of the industry leaders

Differentiators

- **Focus on software and high-tech companies, ISVs, OEMs**
 - **Flexible/agile engagement model and development methodologies** based on the high-tech customers' specific needs
 - **Wide expertise range:** system level and embedded plus enterprise applications
 - **Full set of services** required for a software or high-tech product companies: from product concept and pre-sales to deployment and support
- **Russian skills + Western culture**

Resources

- **Best academic – Moscow State University**
 - 40% of engineers from MSU
- **Regional access – N. Novgorod**
 - Best technical universities outside Moscow
- **Highly experienced engineers**
 - Average 9.5 years of experience
- **Modern Training Center**
 - Internal training programs and training as a service
- **Low attrition and rotation**



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Special Offering for ISVs/OEMs

- **Software and high-tech product companies** have been Auriga **focus** since 1990
- **Optimized engagement model** has been developed based on 18 years experience to cover **specific ISV/OEM's needs**
 - Tight integration with existing engineering force (processes, tools)
 - Intensive communications and knowledge transfer without high onsite work ratio
 - High flexibility at project (reqs set and prios) and portfolio (resource allocation and prj prios) levels
- Auriga can offer **more than a standard ODC**
 - From the metaphor of 'team working on a set of projects' to 'organization working on a portfolio of projects'
 - Added product and process QA, access to organizational assets, history and resources
- Orientation on **satisfying specific customers' needs**
 - Our size is our benefit – small & medium teams (3-9 engineers) get the level of management attention that only 100/1000-engineers teams can expect from larger providers
 - Our flexible model and "common-sense" QMS allow for satisfying specific needs
 - A unique ability for a tier-1 service provider



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Talented and Experienced People



Moscow State University (MSU)

- Highest rated university in Russia
- Auriga's Founder—MSU Professor 1971–1991
- Over 40% of engineers are MSU graduates



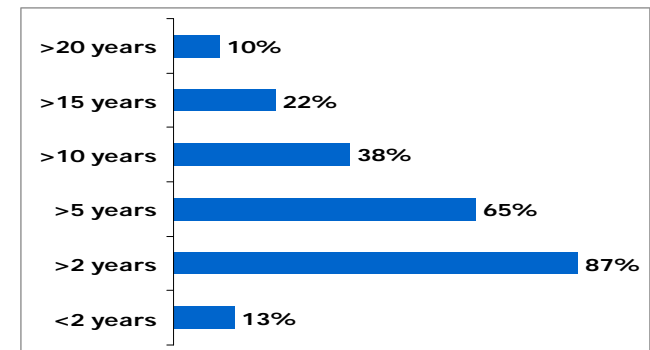
N. Novgorod (Founded in 1916)

- 26,000 students (4–8 yr degrees)
- One of Top 10 Microsoft Partner Universities

Education

- 41% Mathematics
- 27% Computer science & IT
- 17% Physics
- 13% Engineering
- **97% with MSc and higher degrees, including 4% PhD**
- **Avg 9.5 years of experience**
- **6 FTE in IT Training, 5 FT English instructors**

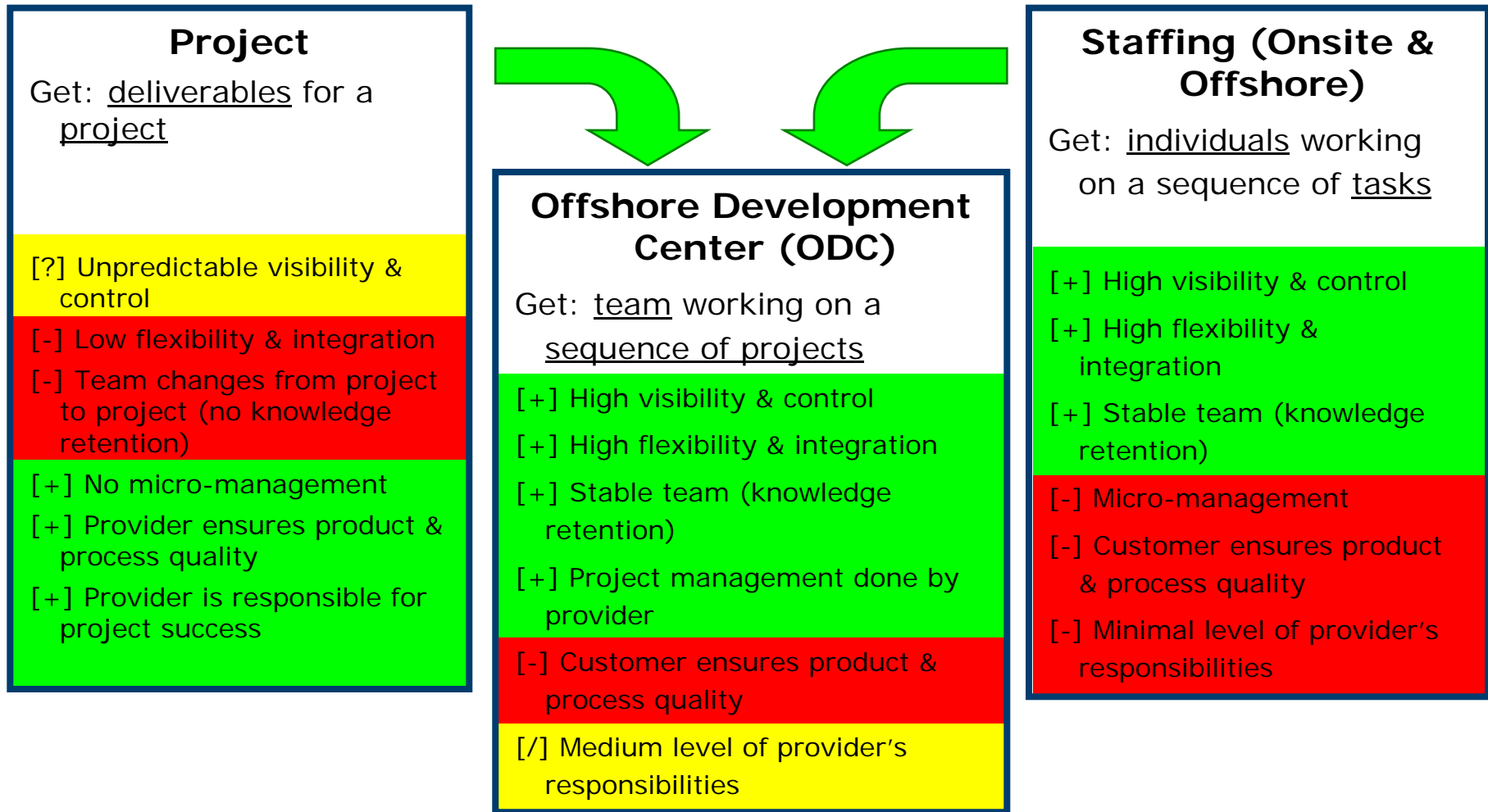
Industry Experience Breakdown



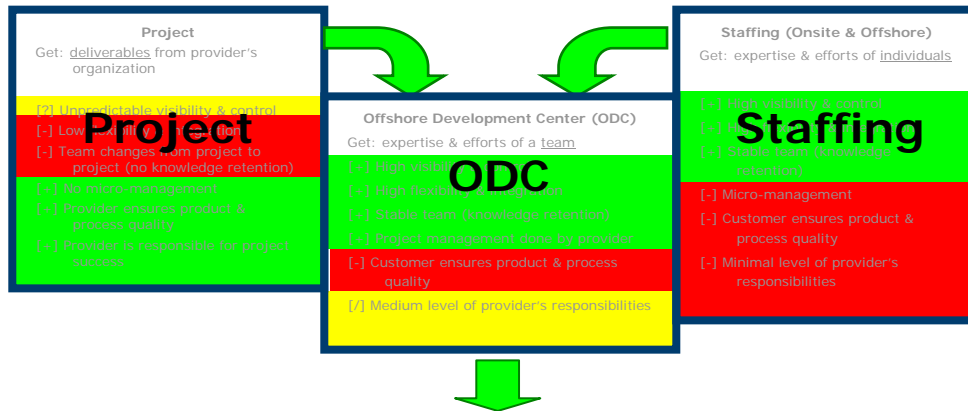
Development Approach

- **Software/high-tech** product development/maintenance has its **specifics**
 - High pressure from the market leads to frequently changing requirements, the need in short TTM and inventive approach from the team
 - Common values are still in place – high quality, low overhead, low cost, ...
- **Light-weight, flexible, agile** process is **often** an answer
 - Short iterations with fixed scope
 - Continuous involvement of the customer
 - Direct communications at all levels
 - Frequent light-weight reviews
 - Test-driven development
 - Peer reviews and peer work
 - Getting commitment from engineers through involvement in effort estimation
 - History-based planning & estimations
 - Strict up-to-date KISS principle in design
- **Results**
 - Many projects are performed according to agile practices, though rarely formally called XP or Scrum

Engagement Model: From Conventional ...



... To REC – a Further Evolution of ODC



Remote Engineering Center (REC)

Get: organization working on a project portfolio

- [+] High visibility & control
- [+] High flexibility & integration
- [+] Stable team (knowledge retention)
- [+] Project management done by provider
- [+] Provider ensures product & process quality
- [/] Upper-medium level of provider's responsibilities

• Engineering

- Requirements, Design, Coding, Testing, etc
- Configuration Management
- **Product QA [added]**
- **Product Lifecycle [added]**

• Project/Product Management

- Planning, Risk Management
- Monitoring and Control
- Knowledge Transfer and Retention
- **Org. Assets, Hist. Data [added]**
- **Supervision [added]**

• Portfolio Management [added]

• Process Management & QA [added]

Informational Safety

- **IP and Data Protection** are extremely important for high-tech and software product companies that outsource in their core competence areas
- **Intellectual Property Protection**
 - Non Disclosure Agreement (NDA)
 - Individual confidentiality agreements
 - Work station monitoring
- **Secured Access**
 - 24x7 full on-site security
 - CCTV complete territory coverage
 - All premises access via security badge
- **Data Security**
 - Passwords, encryption, firewalls
- **Network Protection**
 - Firewalls, permanent IPSec VPN, journaling/auditing
 - Integrated antivirus (TrendMicro & NeatSuite)
- **Data Back-Up**
 - Double and triple back-up methods
 - Centralized HP Tape Library based back-up system
 - Interoffice back-ups
- **Secure, Stable Connection**
 - Dedicated fiber line to backbone
 - Internet gateway with balanced bandwidth 10 Mbps



Sample Project: BlueCat Linux Distribution

Client Objectives

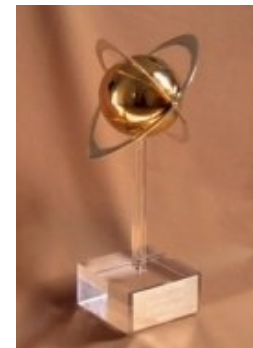
- Develop Linux based embedded product offering augmenting its flagship LynxOS real-time operating system
- Outsourcing was considered as an alternative to creating the new product in-house because of resource shortage in U.S.

Developer's Review (www.linuxdevices.com)

- This simple installation design is remarkably clever and useful. It instantly expands the range of host Linux distributions to include nearly any that can run a shell script.
- I found working in the BlueCat environment exceptionally easy and intuitive despite (some might say because of) its command-line orientation. The tools are well thought out with intuitive naming and behavior, and backed up with documentation of the highest quality.
- Most significantly, the entire process is extraordinarily well documented in the User's Guide, resulting in a complete and usable system.

Project Results

- Auriga developed a brand new product from scratch after getting requirements from LynuxWorks
- A complete embedded Linux distribution was completed in just 1.5 years after the project start and immediately won the prestigious Electron d'Or award as the best embedded product of the year (2000)
- Auriga is responsible for design, coding, testing, user documentation & maintenance



Contacts



Thank You and
We Look Forward to Working with You

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