Studia Generalia

iobox Development

iobox – A TerraMobile company

25.10.2000 Kari Penttilä

iobox in Nutshell

- Pioneering Wireless pan-Europian portal (now 2 M reg.users)
- Two fold strategy BtoD and BtoC segment
- One-stop for shopping for hosting
- Over 130 employees
- Launched early 1999, by Jari Ovaskainen and Henry Nilert
- Operations in Finland, Germany, Sweden, and UK
- Belief: Future of Internet is wireless
- Acquired by TerraMobile in July 2000 for EUR 230 million
ioobox Services

**BtoC**
- Messaging
- Personal Information Management
- Mobile Fun
- Content Aggregation
- mCommerce

**BtoB**
- Mobile Internet Platform for Private Label Hosting

Purpose of this presentation

- Understanding of operations of Wireless Portal Company
- What it takes to run Development in Start-up
- What kind of Employer ioobox is
- Understand the Technology behind
Topics

- Manage the Growth
- Manage the People and Organisation, and Motivation
- Manage the Innovation
- Manage the Development
- Manage the Production
- Manage the Goals / Strategy
- Manage the Costs
- Manage the Tools / Methods / Technology

Manage the Growth – start-up

- Think big and small – keep the vision of each step of organisation.
- Can not grow bigger without going trough all the phases (pain)
- Let all employees to know the status (open communication)
- Formal training very difficult – must trust A class people
- Configuration and Release control to be thought first
- Version control & backups – secure the investment
- Don't save in equipment
- Define responsibilities regularly – situation changes rapidly
- Enforce processes by testing
Manage the Growth – steps in iobox

- Less than 20 people
  - Single project mode – one man show

- More than 40 people
  - First signs to step into matrix org. Assigned responsibilities

- More than 60 people
  - First signs to introduce project management
  - Formal work order processes
  - Multiple development sites
  - Formal Release Process

- More than 80 people
  - Full functional matrix organisation
  - Formal Integration Process

Manage the People and Organisation

- Face the fact expert is not a good project manager.
- Let the experts make the decisions – not managers.
- People say organisation does not matter, but it will.
- Communicate the organisation – even changing monthly.
- Management is to make changes at the speed people can take it.
- Provide job rotation, maintains the motivation.
- Identify the hot spots in the organisation and double them.
- Remember the office culture and example of the management.
- Organise regular get-togethers.
Manage the People and Organisation

- People have different backgrounds:
  - Example Telco / Internet - get the best of the people
  - Telco: Execute in Waterfall - plan for scalability
  - Internet: Quick and dirty - worry scalability later functionality first
- Never put a person to a management position without “testing” his/her capabilities. Allow people to take their place.

Functional Elements – dilemma?

[Diagram showing various functional elements such as Product Marketing, System & Application Architecture, SW Platform Development, Network Planning, Site/Portal Management, System Testing, Site Operations, Partners & Sales, Country Organisations, Customer Care, Customer, Strategic Technologies]
Cross Functional Team Organisation

Bonus Schemes

- **Option Programmes**
  According to the will and guts of the person

- **Competitive Salary**
  Not tied to the line hierarchy

- **Other incentives and benefits**
  BUT most important anyhow is the atmosphere created by company culture.

- **No incentive plan can create motivation itself – it is the WORK**
Manage the Innovation

- In leading edge:
  - Technology Push is essential – market does not know what to want
  - Avoid being leading follower – me too.
  - Support technology spin-offs. Buy in people with ideas.
  - Do not implement commodity, do only “bleeding edge.
  - Organise implementors and innovators, and define handover
  - Understand the value of “designware”
  - Organise groups with independent missions – for results

Manage the Development

- Remember the formal process to get commitment from development – ability to be trustworthy to your partners
- Establish own organisation for deployment of services for internal and external customers (Professional Services / Portal Development
- Guarantees development of next set of services / applications / releases.
- Formalise system testing and handover to production
- In early stage concentrate to deliver rather the quality – this exercises the internal development processes.
- BUT Implement in backwards compatible way always
Dev. Process
Service Rollouts, Rapid Loop/Project Loop

1. Process
- Define Business & Tech. Requirements
- Evaluate Package, Box & Freeware
- Detailed Specification / Prototype
- Buy, Download, & Configure
- Code & Integration Test
- LIGHT FOR RAPID LOOP
- System Test
- User Acceptance Test
- Country Rollout

Length of cycle:
Days, Weeks, or Months depending on scope of release

2. People
- Business Development, System Architects & Customer Care
- Buz Development
- Site Operations Team
- Business Development & Beta Users

3. Technical Environment
- Service & System Development Teams
- Architects
- System Test Envir.
- User Testing Envir.
- Production Environments

Office, Demo, & Rapid Loop Environments
Personal Coding, Rapid Loop, & Unit Testing Environments
System Testing Envir.
User Testing Envir.

Back-office reporting and banner management tools

PRODUCT MANAGEMENT
DEVELOPMENT
TESTING
DELIVERY
OPERATIONS

Workflows

Product Line Management
Development
System Testing
Enhancements
New Functionality

Sales & Partnership
Professional Services (Partners)
Publishing and iobox sites
Country Organizations (non site-related)

Sales & Operations
Manage the Development - Technology

- Don't invent the wheel - use proven industry standards
- Whatever you have invented someone might have implemented a proto already - download and test.
- Keep focus on implementing services to millions of users
- Understand the purpose of platform in (speed of development)
  - Transaction handling
  - User accounts
  - Security
  - Scalability
  - Data warehousing
- Seek partners to implement services in the framework
- HONOUR ARCHITECTURE – KEEP IT CONSISTENT
**Manage the Production 24/7**

- Do only the value added part, externalise de-facto part.
- In very early stage focus of delivery, then quality.
- Train operations to drive the deployment.
- Do not forget capacity planning, user base growth is exponential in succeeding companies.
- Remember the operations and customer care in development – implement management interfaces and back-office tools with every service.
- Remember the regulators and legislation for security and logging.
- Monitor the systems for fraud and attacks.

**Manage the Goals / Strategy in dev.**

- Create real value: Possess the technology used
  - Encapsulate that in platform
- Visibility: Communicate the goals and strategy to everyone
  - Make the goal of company to goal of every individual
- Concretise the Goals: Have a masterplan on all levels of operations
  - Campaigns / Partnerships
  - Releases
  - Deployments / Site building
  - Expansions
  - Researchs
- Follow-up: Number of matters may drop into grey area – keep regular development / project meetings.
Manage the Goals / **Strategy** in dev.

- iobox had two parallel competing lines of strategy for dev to execute
  - BtoC executed to proof iobox for BtoD
  - BtoD executed for revenue
- To guarantee the value of company in future:
  - Add value by implementing a wireless internet platform
  - Do not position the company in commodity
    (example selling toys in the internet)
Manage the Cost

- Remember the mortality – money is a fuel
- Follow-up the realisation of business plan weekly, monthly
- Follow-up the realisation of costs weekly
- Avoid ad-hoc investments – careful reasoning
- Reserve budget for firefighting – for immediate execution
- In operations do not trust on “SLA” from HW vendors – invest on backup reserve.
- Understand the major costs, do not save pennies

Manage the **Tools/Methods/Technology**

- Do not overtrust tools, understand what you are doing
- Automate routines as soon as possible: (examples)
  - bugtracking
  - regression testing
  - load testing
  - rollout-environment
  - version and configuration control
- Invest in modelling tools
Manage the Tools/Methods/Technology

- Apply patterns already invented - senior people in group leadership
- Methods used must match the Technology used
- Often very difficult to apply in leading edge development
- Methodology is usually applicable only at the second round
  - learn somewhere else
  - apply here

Manage the Tools/Methods/Technology

- Use Technology that has been proven in the industry
- Don’t invent proprietary extensions - technology trap
- Possess every area of technology you are integrating
  - to avoid being mercy of third parties
- Evaluate and test run every technology you are about to use
  - recruit qualified people already familiar with it
  - integrate and run and ASSESS
- Apply the technology according to the architecture
- Technology is an enabler!
Technology iobox uses

- Basic Programming Technologies:
  - Java, J2EE, Java Beans, 3-tier architecture
- Supported Network Technologies
  - Web, SMS, WAP, GPRS
- Publishing Technologies
  - XML/XSL, WML, HTML, LHTML
- Technology Partners
  - Oracle - database,
  - BEA - middleware,
  - HP - networking,
  - Sun - solaris,
  - Sun - Servers/Clusters

Summary of Key Elements

- Small groups – defined handowers – simple processes
- In depended missions – fully responsible
- Implement only Leading Edge, others subcontracting, buy
- Keep people motivated – provide job rotation, challenges
- Implement on well defined APIs and industry standards
- Continuous evaluation of new technologies
- Rapid prototyping
Operative Organisation - now

Thank You!

Now ioabox continues its story as part of TerraMobile

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