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IT Project Risk

Case Study: IFSO

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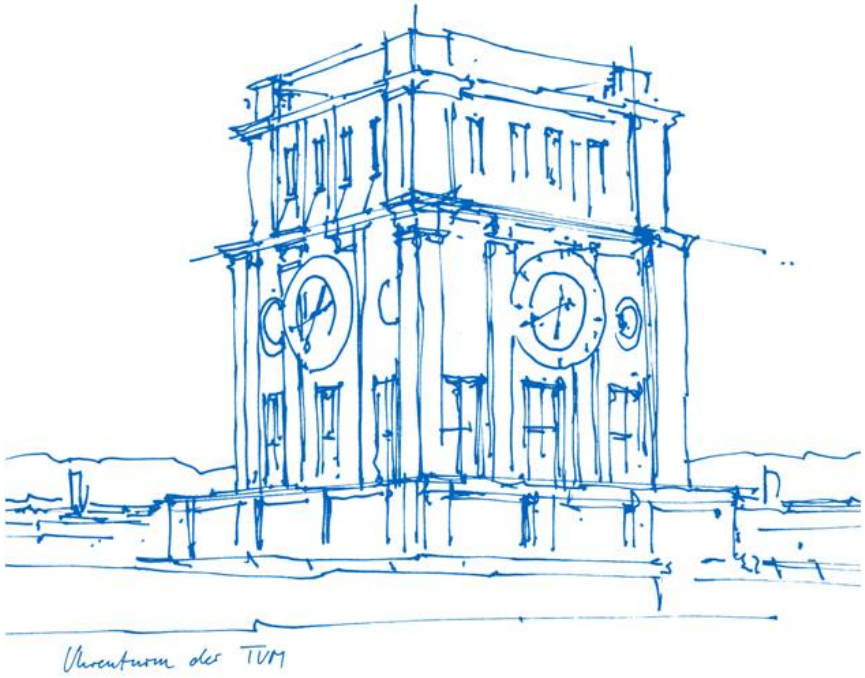
Munich, 29. January 2021



AGENDA

1. Classic Mistakes & Best Practices
2. Assessment of IFSO's IT project management practices based on the Best Practices
3. Best Practices vs. OBRiM framework

1 Classic Mistakes & Best Practices

Consequences of lacking Risk Management

- Bank of America developed a new trust accounting system.
- Masternet Project failed due to insufficient risk management.
- Loss of several billion dollars due to hardware problems.
- **Result:** firing 255 people, the entire trust department.

Classic Mistakes

Classic Mistakes

Mistakes that tend to be made more often than others, which ultimately **lead to the failure of the project.** They are categorized as:

People: Motivation, team relationships, dealing with employees, allocation of human capital.

Process: Both management processes and theoretical methodologies like poor time management and scheduling, ineffective planning, abrupt changes in deliverables and quality specifications, as well as poor risk management.

Product: Focus on adding unnecessary characteristics (Gold plating) or making sudden changes to requirements.

Technology: Applying or switching to new attractive technologies and overestimating its ability to solve problems or optimize, leading to disappointment in most cases.

Nelson (2007)

Classic Mistakes

Majority of them fall in the **"People"** and **"Process"** categories.

Among which many related to **poor requirement, deliverable, and resource planning and estimation,** while others are connected to the **relationships among employees or between them and sponsors or developers.**

Classic Mistakes (descending order of occurrence)	Category	No. of Projects	% of Projects
1. Poor estimation and/or scheduling	Process	51	54%
2. Ineffective stakeholder management	People	48	51%
3. Insufficient risk management	Process	45	47%
4. Insufficient planning	Process	37	39%
5. Shortchanged quality assurance	Process	35	37%
6. Weak personnel and/or team issues	People	35	37%
7. Insufficient project sponsorship	People	34	36%
8. Poor requirements determination	Process	29	31%
9. Inattention to politics	People	28	29%
10. Lack of user involvement	People	28	29%
11. Unrealistic expectations	People	26	27%
12. Undermined motivation	People	25	26%
13. Contractor failure	Process	23	24%
14. Scope creep	Product	22	23%
15. Wishful thinking	People	18	19%

Nelson (2007)

Best Practices

A collection of methods, tools, and techniques that, if implemented properly, aid organizations in avoiding the classic mistakes. Nelson views these practices in light of the 7 most common mistakes.

1. Avoiding Poor Estimating and/or Scheduling
2. Avoiding Ineffective Stakeholder Management
3. Avoiding Insufficient Risk Management
4. Avoiding Insufficient Planning
5. Avoiding Shortchanging Quality Assurance
6. Avoiding Weak Personnel and/or Team Issues
7. Avoiding Insufficient Project Sponsorship

Linking Classic Mistakes to Best Practices

	Classic Mistakes	Agile Development	Communication Plan	Estimate-Convergence Graph	Joint Application Development (JAD)	Comprehensive Project Charter	Project Management Office	Retrospectives	Staged Delivery	Stakeholder Assessment	Work Breakdown Structure
		Best Practices									
1	Poor estimation and/or scheduling	X		X		X	X	X	X		X
2	Ineffective stakeholder management		X		X	X	X			X	
3	Insufficient risk management			X		X	X	X	X		
4	Insufficient planning			X		X	X	X			X
5	Shortchanged quality assurance	X			X				X		
6	Weak personnel and/or team issues	X	X				X	X	X		
7	Insufficient project sponsorship		X		X	X	X			X	
8	Poor requirements determination	X			X						X
9	Inattention to politics		X			X	X			X	
10	Lack of user involvement	X	X		X				X	X	

Nelson (2007)

2 Assessment of IFSO's IT project management practices based on the Best Practices

Irish financial services organization

- Likely irish Bank, financial service provider
- Large number of IT-Projects
- Dedicated Project Investment Department (PID)
- Handles initial risk assessment through weighted survey
- Project Risk Managment Procedure developed by external consultants

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)

Best Practises at ISFO

ISFO evaluates the risk by measuring the uncertainty of several criteria:

1. Benefits
2. Skills & Experience
3. Size & Complexity
4. Architectural Stability
5. Performance
6. Clarity of Scope
7. Organizational Support
8. Change Impact
9. Business Environment
10. Technological Novelty
11. Project Execution Flexibility & Risk Management

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)

1. Avoiding Poor Estimating and/or Scheduling

Evaluated Risk Factors:

BENEFITS

CLARITY OF SCOPE

Best Practices Nelson (2007):

WORKBREAK DOWN STRUCTURE

AGILE DEVELOPMENT

PROJECT MANAGEMENT OFFICE

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)
Nelson (2007)

2. Avoiding Ineffective Stakeholder Management

Evaluated Risk Factors:

ORGANIZATIONAL SUPPORT

BUSINESS ENVIRONMENT

Best Practices Nelson (2007):

PROJECT CHARTER

PROJECT PORTFOLIO

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)
Nelson (2007)

3. Avoiding Insufficient Risk Management

Evaluated Risk Factors:

ARCHITECTURAL STABILITY

TECHNOLOGY NOVELTY

PROJECT EXECUTION FLEXIBILITY & RISK MANAGEMENT

Best Practices Nelson (2007):

PRIORITIZE RISK ASSESSMENT

PROJECT MANAGEMENT OFFICE

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)
Nelson (2007)

4. Avoiding Insufficient Planning

Evaluated Risk Factors:

CLARITY OF SCOPE

PROJECT EXECUTION FLEXIBILITY & RISK MANAGEMENT

Best Practices Nelson (2007):

WORKBREAK DOWN STRUCTURE

AGILE METHODS

PROJECT CHARTER

PROJECT PORTFOLIO

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)
Nelson (2007)

5. Avoiding Shortchanging Quality Assurance

Evaluated Risk Factors:

PERFORMANCE

Best Practices Nelson (2007):

AGILE DEVELOPMENT

JAD SESSIONS

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)
Nelson (2007)

6. Avoiding Weak Personnel and/or Team Issues

Evaluated Risk Factors:

SKILLS & EXPERIENCE

SIZE & COMPLEXITY

Best Practices Nelson (2007):

AGILE DEVELOPMENT

PROJECT CHARTER

PROJECT MANAGEMENT OFFICE

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)
Nelson (2007)

7. Avoiding Insufficient Project Sponsorship

Evaluated Risk Factors:

ORGANIZATIONAL SUPPORT

Best Practices Nelson (2007):

COMPREHENSIVE PROJECT CHARTER

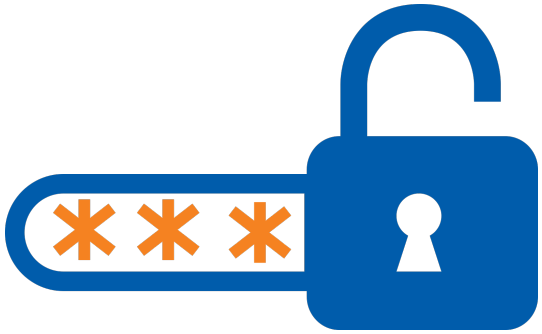
PROJECT MANAGEMENT OFFICE

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)
Nelson (2007)

Improvement Opportunities

Missing Risk Factors:

- Project execution
- Departmental Conflicts, External links



Improvement:

- Introduction of external, departmental communication Plan

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)
Nelson (2007)

Assesment of ISFO

- Preevaluation of projects for risks and creation of risk management plan effective
- ISFO can avoid classic mistakes through well developed risk management
- Risk management follows industry and academic recommendations
- Mainly Internal focus, can be improved

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)
Nelson (2007)

3 Best Practices from Nelson (2007) vs. OBRiM framework

Classic Mistakes and Best Practices (Nelson)

Most Common Mistakes in IT Projects are Process- or People-related

#	Classic Mistakes (descending order of occurrence)	Category	No.	%
1	Poor estimation and/or scheduling	Process	51	54
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10	Lack of user involvement	People	28	29

"Search for Patterns to Avoid Repeating the Same Mistakes!"

'Classical Mistakes'

… are ***predictable,*** *NOT* by chance

… are classified as People, Process, Product or Technology

… *BUT* majority were from either ***Process (45%) and People (43%)***

Nelson (2007)

Classic Mistakes and Best Practices (Nelson)

Best Practices to avoid Top 10 Classic Mistakes are suggested

	Best Practices for Successful IT Projects	# of Mistakes affected	
		Process	People
1	Agile Development	3	2
2	Communication Plan		5
3	Estimate-Convergence Graph	3	
4	Joint Application Development (JAD)	2	3
5	Comprehensive Project Charter	3	3
6	Project Management Office (PMO)	3	4
7	Retrospectives	3	1
8	Staged Delivery	3	2
9	Stakeholder Assessment		4
10	Work Breakdown Structure	3	

"Focus on Process- and People-Aspects for Successful IT Projects!"

'Best Practices'

… are methods, tools, and techniques

… which help avoid classic mistakes from occurring ***in advance***

Nelson (2007)

OBRiM framework (Benaroch)

Optimal Options are embeded in Risks in IT Investment

Matrix (Sample)

Risks \ Options	Defer	Explore	Stage	Abandon	Contract	Outsource	Lease	Expand
Monetary								
PJT execution								
Organization								
Competition								
Environmental								
Technological								

"Choose the Right Option to the Specific Risk!"

The most ***Cost-effective*** **link or connection or combination or mapping**
… btw ***particular*** 'IT Investment Risks' & 'Options'
… which optimally ***control risks***
and ***maximize investment value***.

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)

OBRiM framework (Benaroch)

Two Tenets of OBRiM

1. ***"Presence of Risk precedes any Decision to Embed Options"***

   OBRiM ***prescribes*** which options to embed for which specific risk

2. ***"Combinations of Options impact the Investment Value"***

   Different combinations of options result in different ***investment yield*** in projects

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)

Nelson vs. Benaroch Models

There are differences in Best practices compared to OBRiM

	Best practices	***OBRiM framework***
Approach	**Avoid Mistakes** : Practices → Mistakes (X)	**Control Risks** : Risks → Options
Subject	Mistakes in IT Project	Risks in IT **Investment** Project : ***Monetary/Economic*** value matters! $
Coverage	Focused on **internal** factors : Process, People	**Comprehensive** risk areas : Internal + External
Level	**Best Practices** are **Narrower** concepts : methods, tools, techniques	**Operating Options** are **Broader** concepts : regarding projects itself

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)
Nelson (2007)

Classic Mistakes vs. Risks

Top 10 Classic Mistakes from Nelson model

Poor estimation and/or scheduling
Ineffective stakeholder management
Insufficient risk management
Insufficient planning
Shortchanged quality assurance
Weak personnel and/or team issues
Insufficient project sponsorship
Poor requirements determination
Inattention to politics
Lack of user involvement

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)
Nelson (2007)

Risk Areas from OBRiM framework

Monetary : Costs, Benefits
Project Execution : Project, Function
Organizational
Competition
Environmental
Technological

Best Practices vs. Options

Best Practices from Nelson model

Agile Development
Communication Plan
Estimate-Convergence Graph
Joint Application Development (JAD)
Comprehensive Project Charter
Project Management Office (PMO)
Retrospectives
Staged Delivery
Stakeholder Assessment
Work Breakdown Structure

Options from OBRiM framework

Defer
Explore - Pilot
Explore - Prototype
Stage/Incremental Development
Abandon (Switch-use)
Contract (Change-scale)
Outsource Development
Lease
Expand (Strategic Growth)

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006)
Nelson (2007)

Integration

How integrated?

'Best Practices' in 'OBRiM'

01 Suggest combination of solutions

02 Categorized issues

03 Proactive approach

04 Can be generalized

Integration

The Potential for Integration

of ‘Best Practices’ to ‘OBRiM’

01 Cover directly cost-related risks

02 More focus on external factors

03 Broader range of application

04 Continual evaluation

05 Quantitative evaluation

DISCUSSION QUESTIONS

1. Now that you know about best practices and classic mistakes, how would you fix the mistake the Bank of America made in the first example?

2. Why are classic mistakes still being committed although they have already been identified?

3. Would you rather follow Nelson's approach, in implementing management structures within your projects, or go with ISFO Methodology on preselect and manage your projects?

References

Benaroch, M., Lichtenstein, Y., & Robinson, K. (2006). Real options in information technology risk management: An empirical validation of risk-option relationships. *MIS quarterly*, 827-864.

Nelson, R. R. (2007). IT project management: Infamous failures, classic mistakes, and best practices. *MIS Quarterly executive*, *6*(2).