

The Role of Research in Security Sector Transformation

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*Proposed model for Program Management in Security research Area is based on
practical experience with NATO SfP/ARW projects, EU projects, USTDA project,
Bulgarian NSF projects as well as projects under National Science Coordination
Committee on Civil Protection as well as Multi-agency Expert Coordination Committee
on Defense Research*



Security sector transformation

Security sector transformation is based on three core ideas:

- Network centric security governance
- Capability orientation
- Improved co-operability among all actors of the security sector and relevant third parties

Supported by introduction of new technologies, close research cooperation and orientation to the end user – the Citizen (Civil Security Concept based on Integrated Security Sector)



The idea of the Architecture

What's Architecture

“the fundamental organization of a system, embodied in its components, their relationships to each other and the environment, and the principles governing its design and evolution”.



Architecture Analysis Method

- Architecture is important
 - it should be analyzed
 - Architecture can be prescribed
 - decisions should be analyzed
 - Architecture is central for communicating
 - it should be documented
 - Architecture is expensive to change
 - it is cheaper to analyze early
 - Architecture affects the entire project
 - many stakeholders should be involved
 - Requirements can be understood early
 - architecture should be designed to meet them
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Alternatives

Generation of the alternatives is based on variation of different elements of agreed general architecture of the system / problem:

- Entity elements of the architecture
 - Content of the entity elements
 - Links between elements
 - Content of the links
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Selection of the alternatives

Three steps:

- Assessment
- Comparison
- Selection

Three classes of decisions:

- Multi-criteria decisions (goal, criteria, sub criteria)
 - Decision making with risk management
 - Decision making in uncertainty
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***Expert Choice* key characteristic:**

- Friendly interface to manage the hierarchy of goal-criteria-sub criteria and alternatives / decisions
 - Easy comparison based assessment of criteria and alternatives / consistency check
 - Graphical interface to analyze results of the assessment and to support selection
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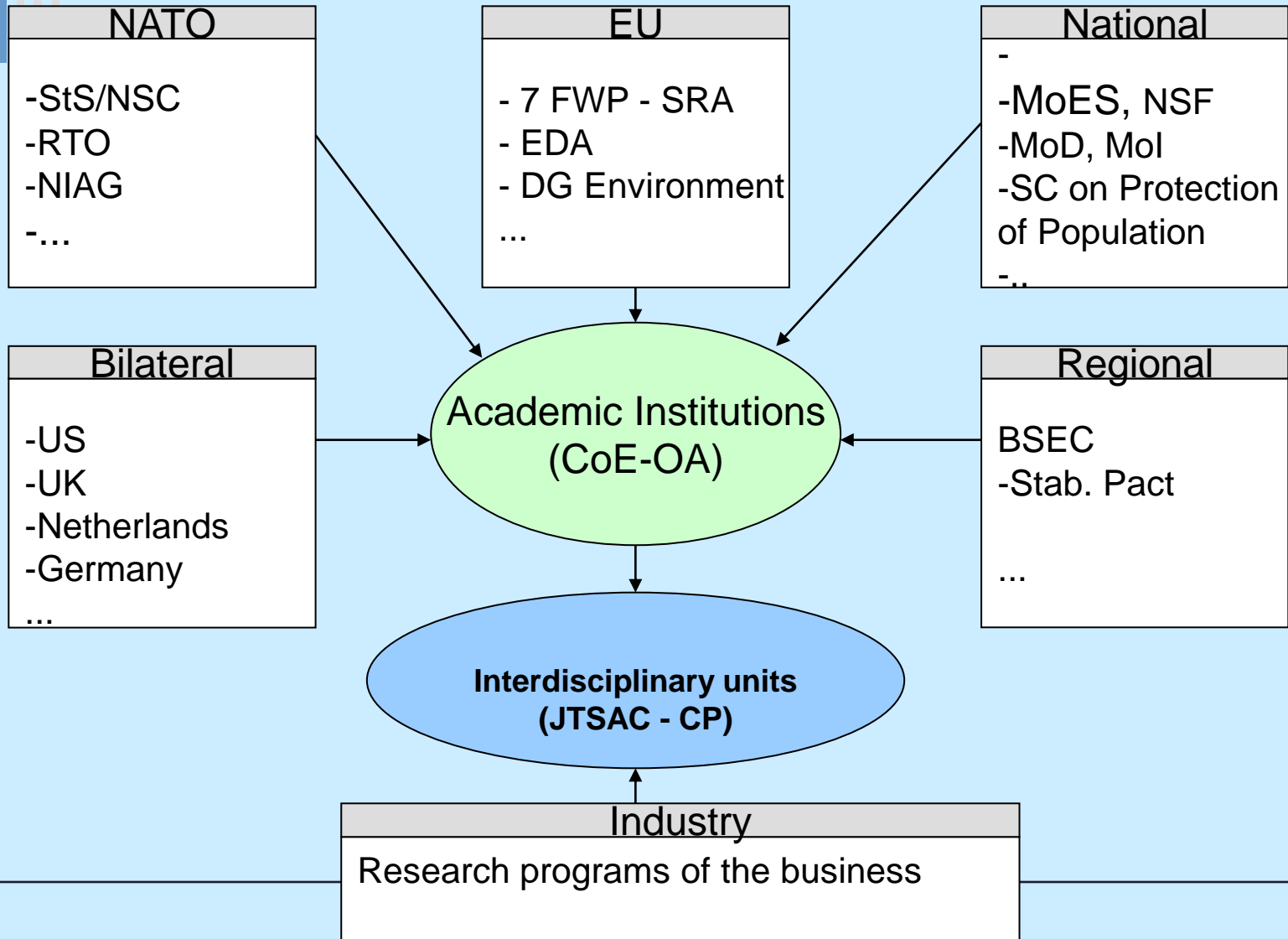
Project Plan

- Result oriented approach (deliverables based)
- Activity description
- Resource management (including human resources)
- Time table optimization

Tool for

- Costing
 - Measurement
 - Reporting
 - Management
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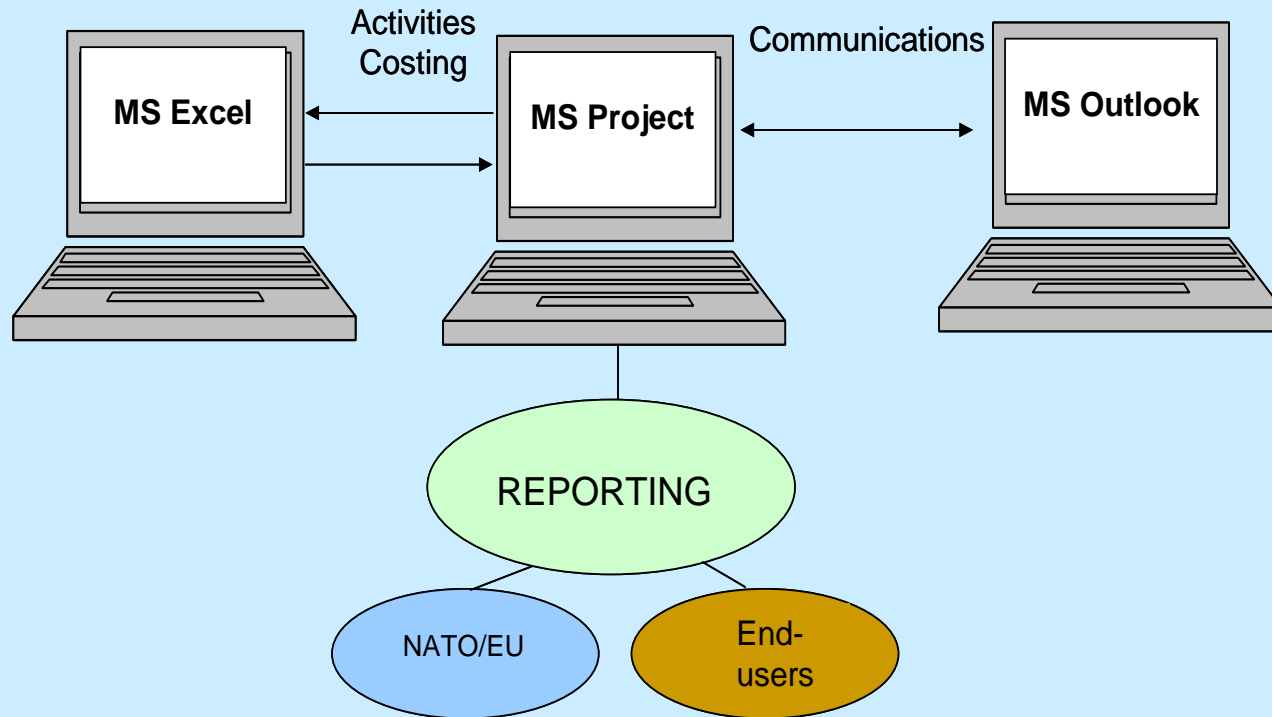
Multi-source funding environment



MAIN TASK:

To be created an aggregated model for project portfolio management and cost estimation of the resources that will be integrated in MS Project on the basis of Excel tables. It will give the possibility to be costed automatically

each activity from the MS Project Plan.





Costing and Reporting

Activity Based Costing – method for costing of a certain activity

ABC algorithm:

- ❑ Determine the activities, concerning the final result.
 - ❑ Determine the expenditures for certain activity and their limitations.
 - ❑ Assessment in expenditure items and distributing to direct and indirect costs.
 - ❑ Summarizing the total expenditures for each activity.
 - ❑ Defining the connections among separate activities and end-results
 - ❑ Assessment of the relation activity model/result.
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Activity analysis

Activity analysis is the essence of ABC method and leads to information heaping of the following types:

- What kind of activity is accomplished during the development process of each system module;
 - Number of operations;
 - How many people are needed for accomplishing of certain activity?
 - Expenditures for the activity accomplishment;
 - Effectiveness and assessment of activity usefulness in the general action scenario;
 - Time for completing the operation;
 - Results;
 - Relation among participants.
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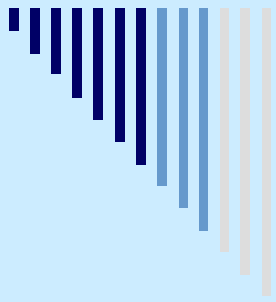


Result measurement

by Balanced Scorecard System:

- Balanced system of indexes for effectiveness (Balanced Scorecard) is a methodology, developed by Prof. Kaplan and Prof. Norton in Harvard in 1992 r., and subsequently widely accepted in management of small, medium and large organizations from private and public sector all over the world
- Balanced Scorecard System is not just a measurement system but a system for strategic management of the organization

If the Balanced Scorecard system is implemented in appropriate way, it transforms in main tool for planning and monitoring of activities, which have to lead to successful accomplishment of strategic organization goals



Balance the perspectives

Yesterday

Financial
<i>How do the shareholders see us?</i>
<ul style="list-style-type: none">• Market Share• Cash Flow

Today

Customer
<i>In order to reach our vision, how should our customers perceive us?</i>
<ul style="list-style-type: none">• Pricing• Delivery time• Quality level• Satisfaction

Internal Processes
<i>Which business processes we need to focus on to satisfy our customers and shareholders?</i>
<ul style="list-style-type: none">• Through-put time• Number of defects

Tomorrow

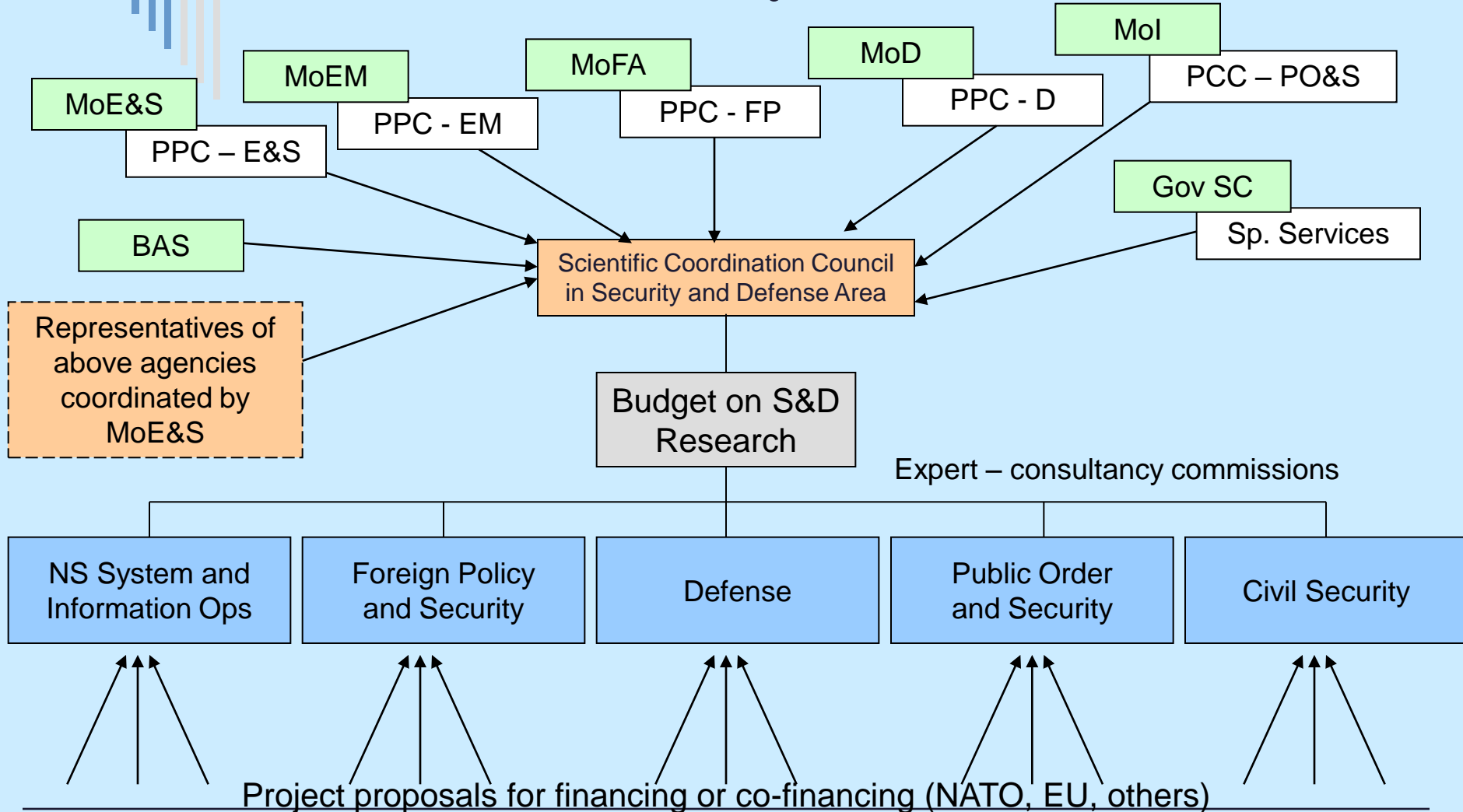
Learning & Growth
<i>In order to reach our vision, how should we develop ourselves, our products and our processes?</i>
<ul style="list-style-type: none">• Number of incentives• Employee retention• Fit to required profile



Implementation through Public-private partnership (PPP)

1. Transparency, accountancy, effectiveness (incl. through competition)
 2. Clear contracts – general clauses, specifications, implementation plan, cost and management of execution;
 3. Precise criteria and formulae for assessment;
 4. Agreement with Law for Public Orders;
 5. Agreement with procedures for budget development and execution;
 6. Agreement with accounting requirements;
 7. Taking into consideration of the end-user's and funding organization requirements.
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Conclusion: Scientific Coordination Council in Security and Defense



Model and SW package for assessment, selection and management of research projects in Security and Defense Area