

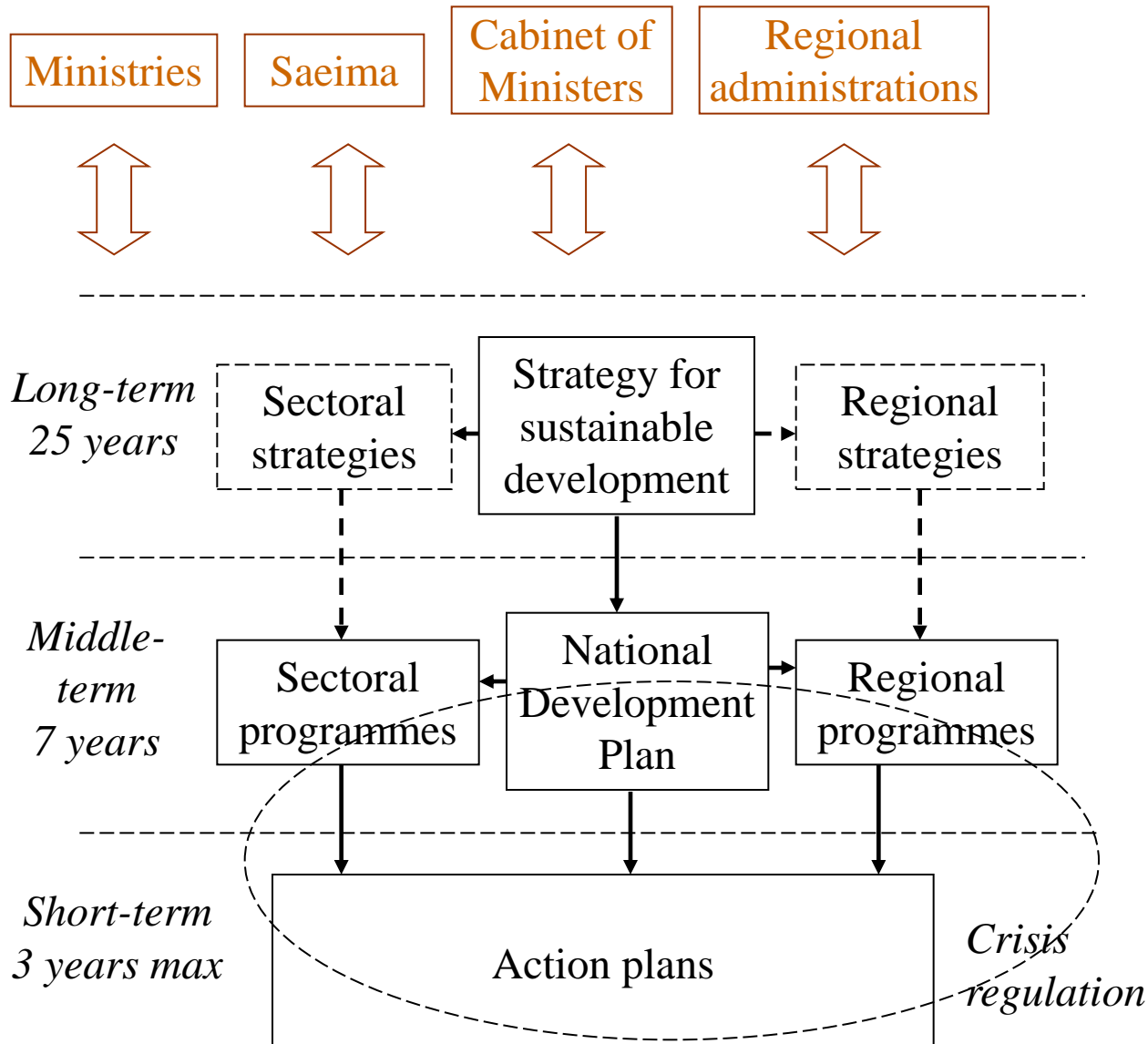


Informative Model for National Development Management

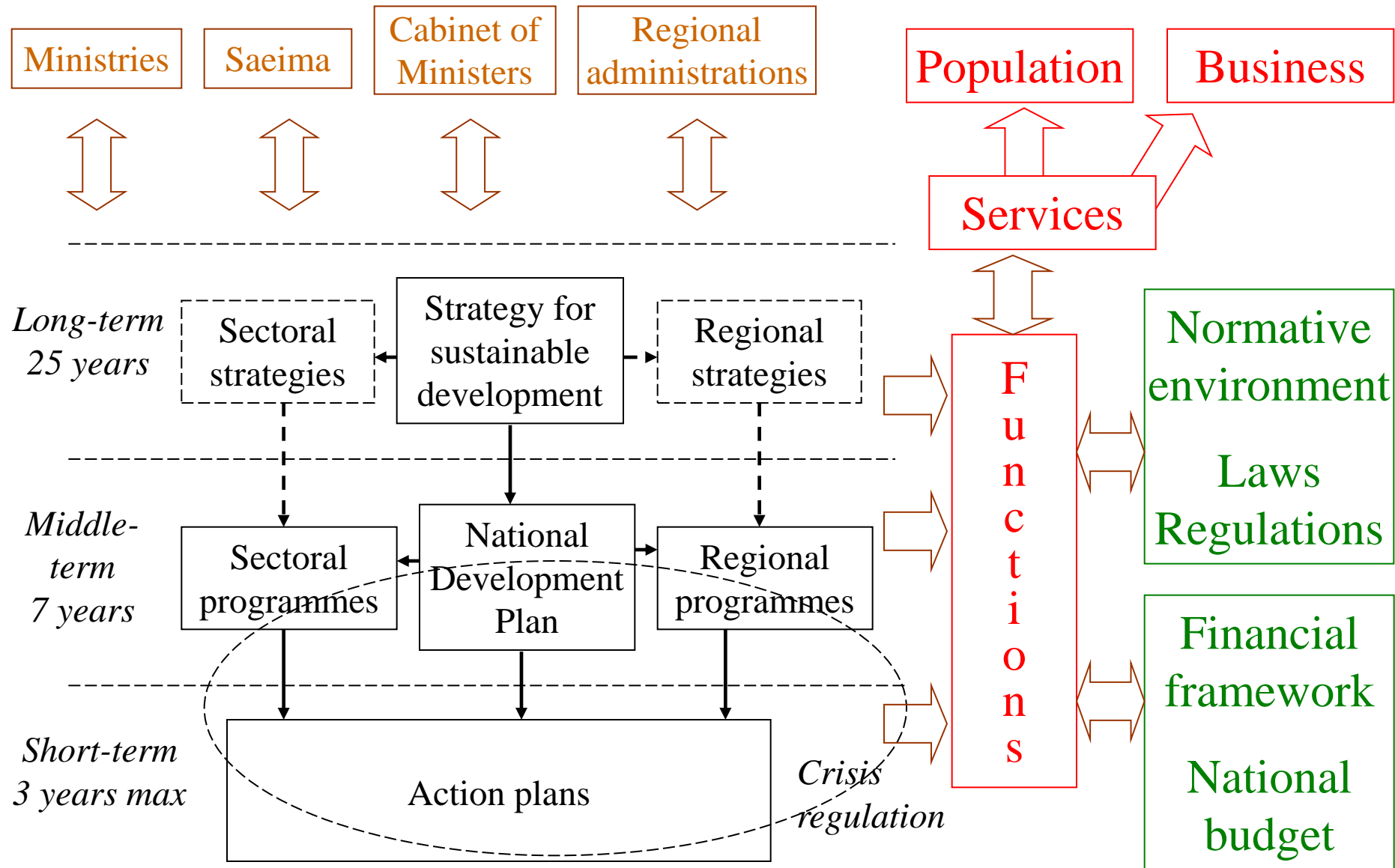
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University of Latvia

Multi-dimensional system for planning of national development



Multi-dimensional system for planning and implementation of national development



Functionality of the system: are consistencies ensured?

- Does any long-term goal is supported by defined mid-term tasks and short-term activities?
- Does regional and sectoral planning documents are consistent with national documents?
- Does responsible institution/person is defined for implementation of any planned activity?
- Are the planned/appropriated budgetary resources consistent with planned activities, performed functions and provided services?
- Does the necessary legal basis exist for the implementation of defined goals?



“YES” has not become a perpetual answer today

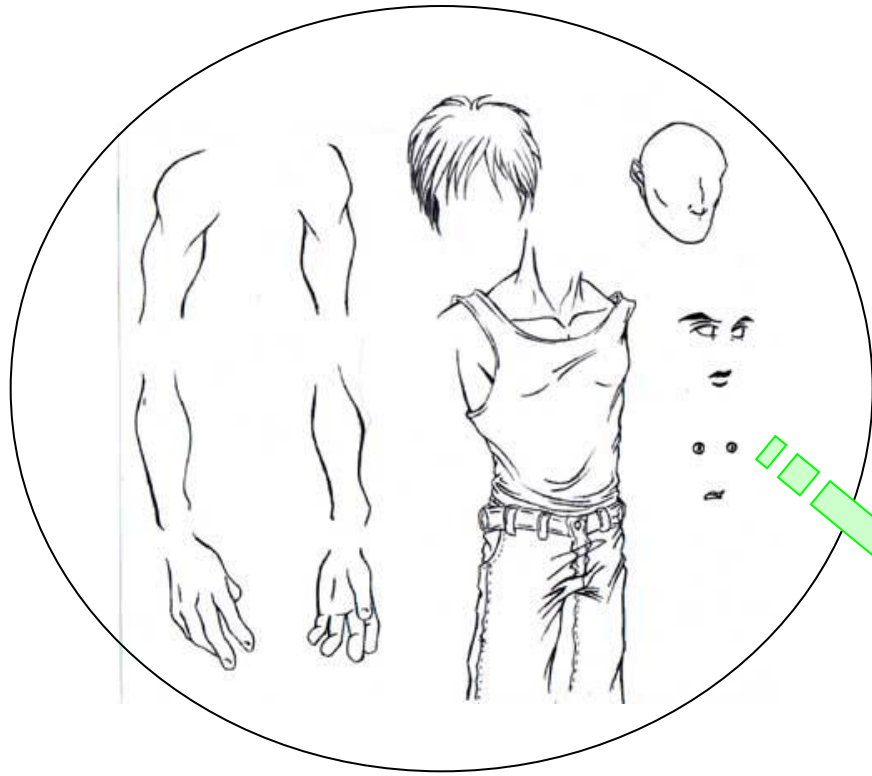
Weakness of management and threat to functionality

- weak connection of planning documents horizontally and vertically;
- weak compliance of implementation activities with planning and normative documents;
- functional obligations of many institutions and sharing of responsibility among them is not defined;
- costs for performed concrete functions and provided concrete services are not calculated;
- strong and direct connection does not exist among planning and normative documents, as well with performed activities, responsible executers, their functions, provided services and budget;

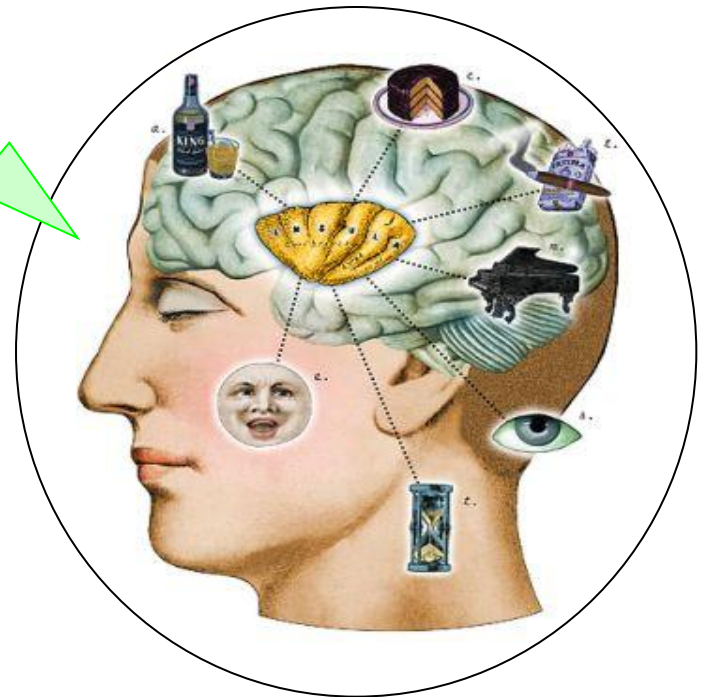


Systematic shortcoming:
high level of generality and lack of concreteness

Key solution: ontology-based algorithm

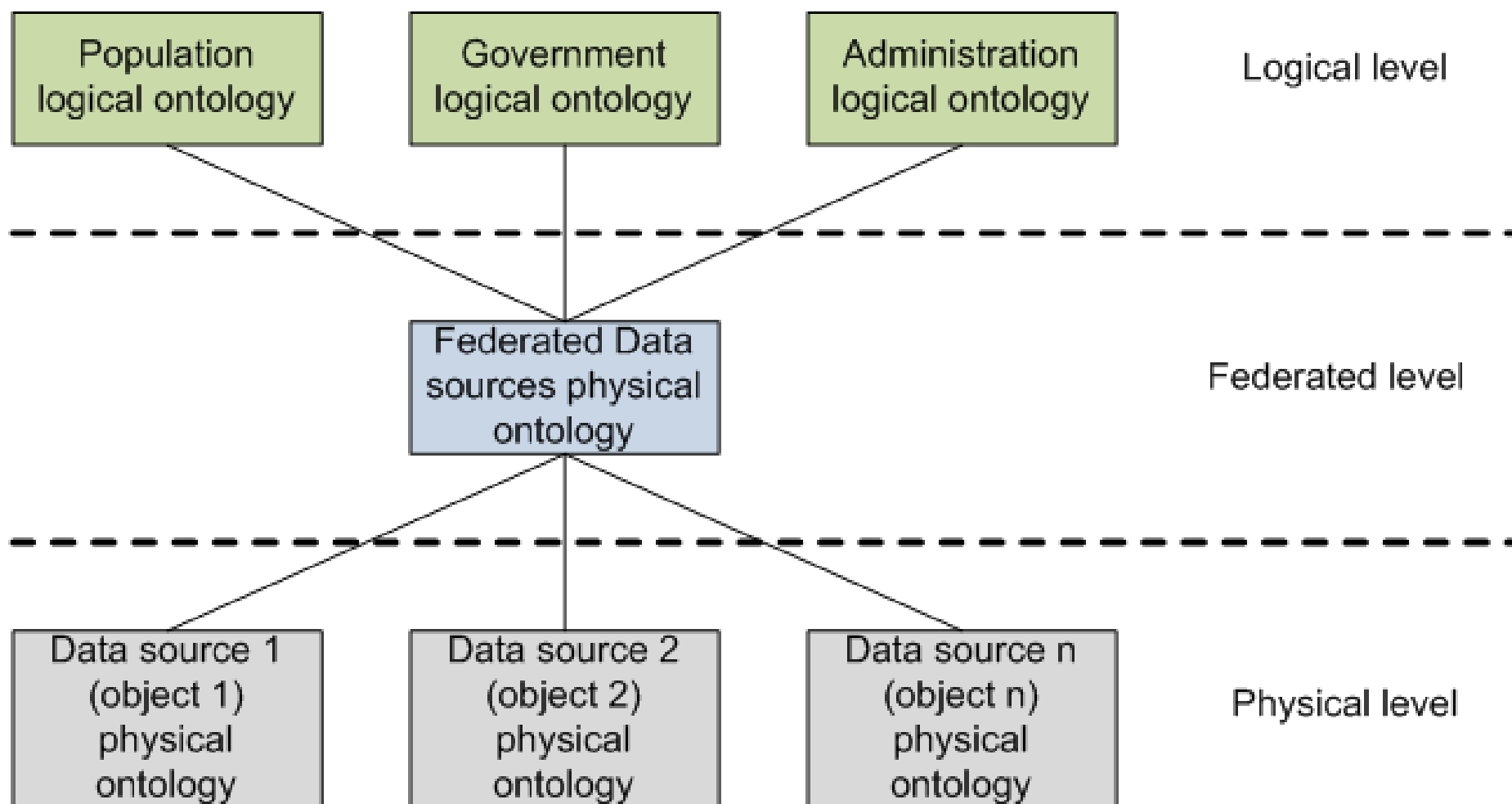


- structurization (decomposition) of all system's objects (documents, institutions, functions, budget, etc.) in elementary units (entities);

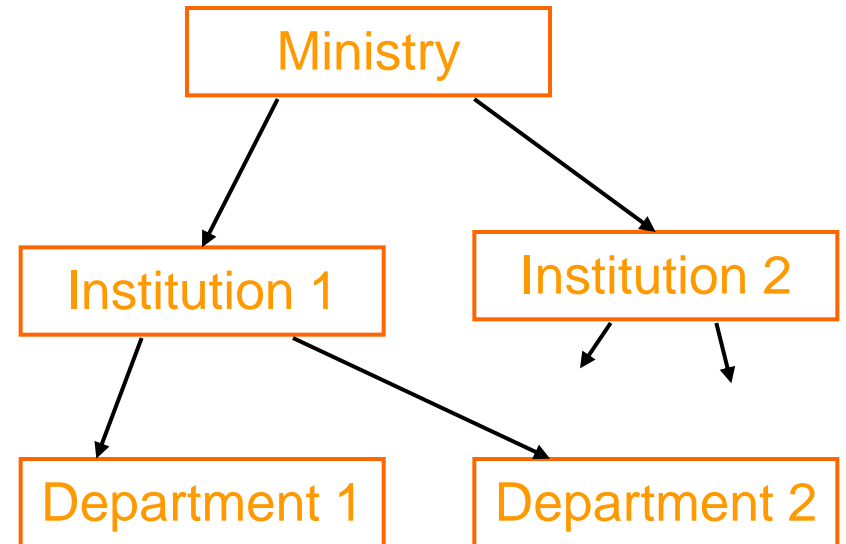


- determination of strict connections (hierarchy and relations) between entities;

Multi-level ontology – informative system's specificity

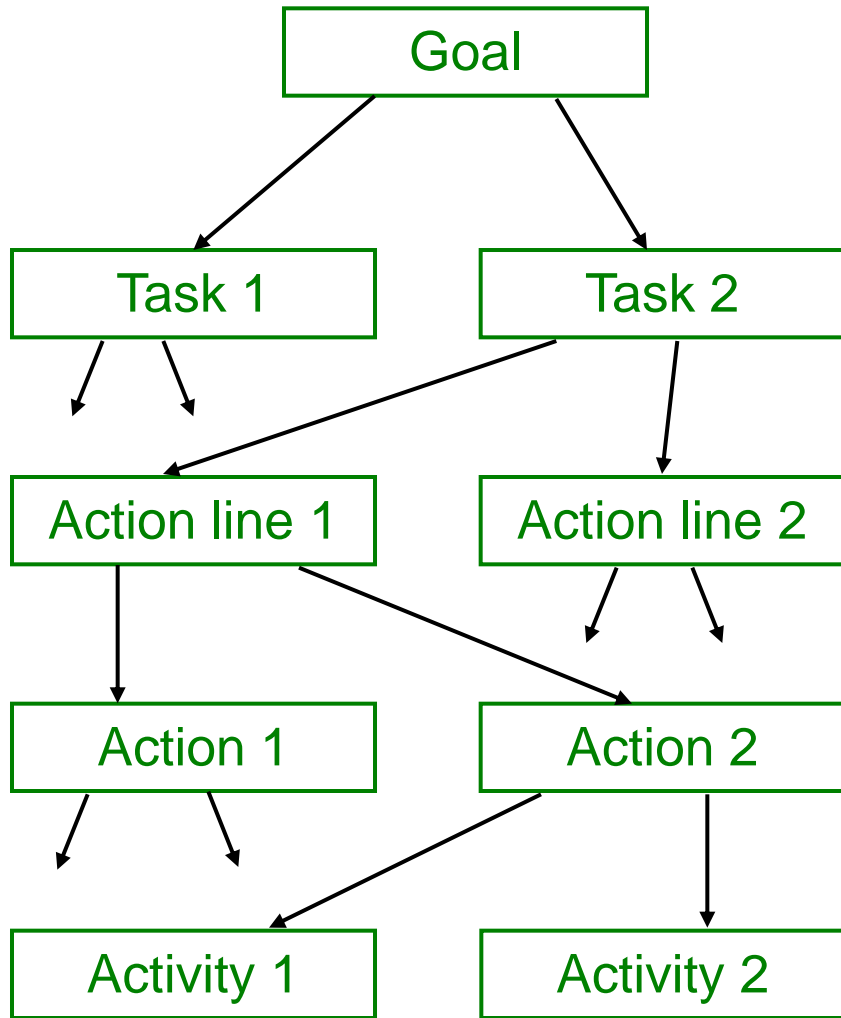


Entities and connections I



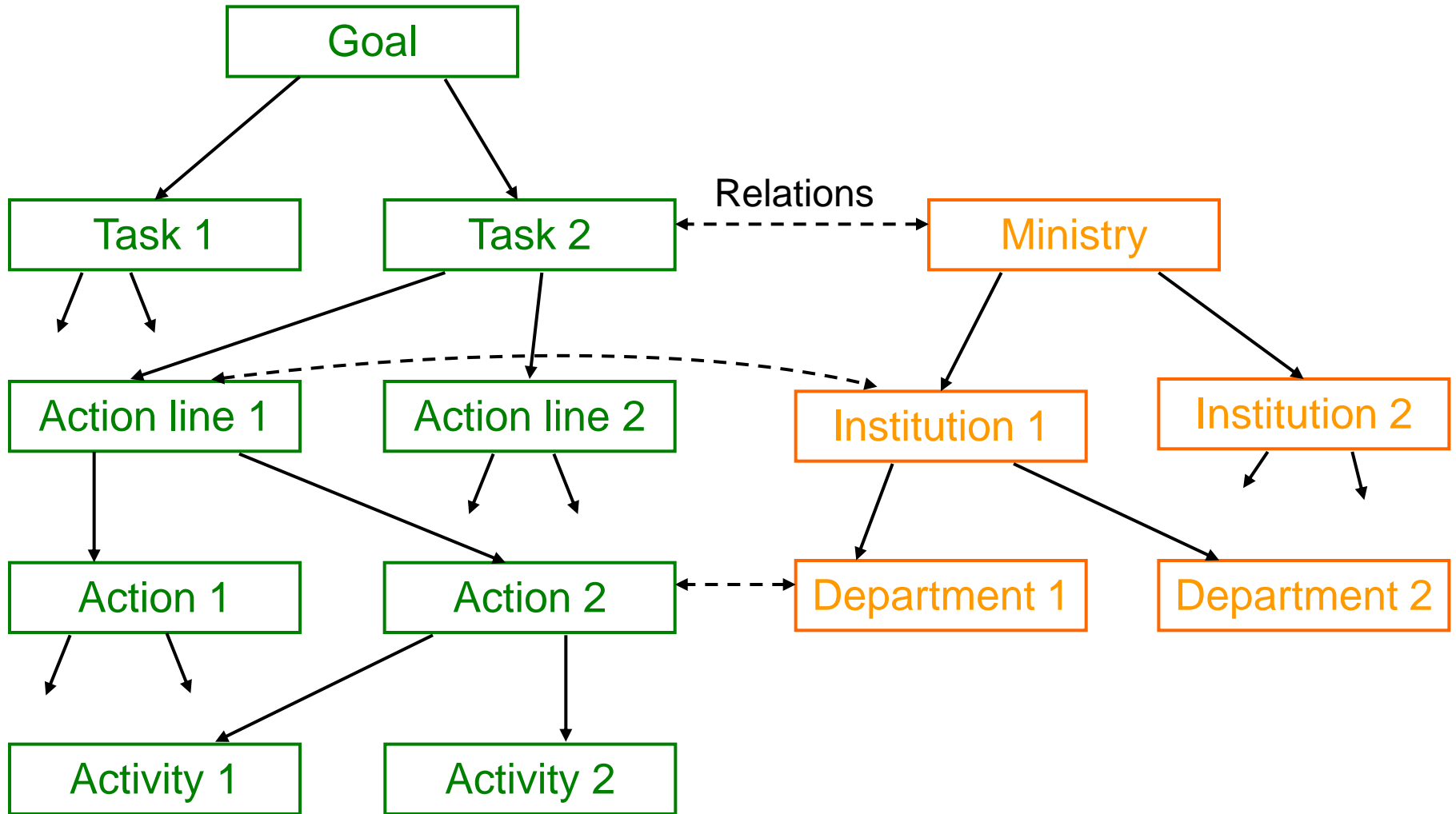
Hierarchic tree 1

Entities and connections II



Hierarchic tree 2

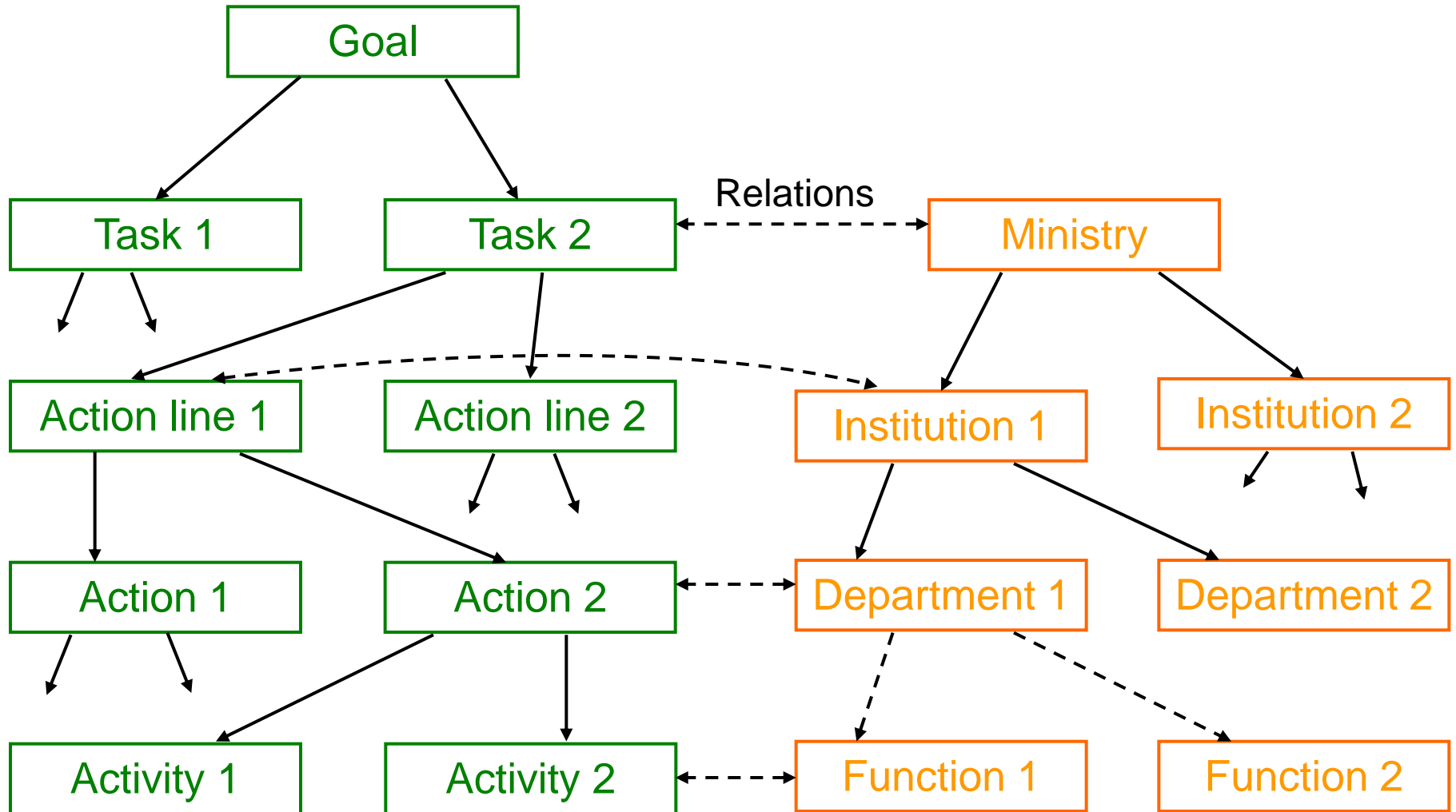
Entities and connections III



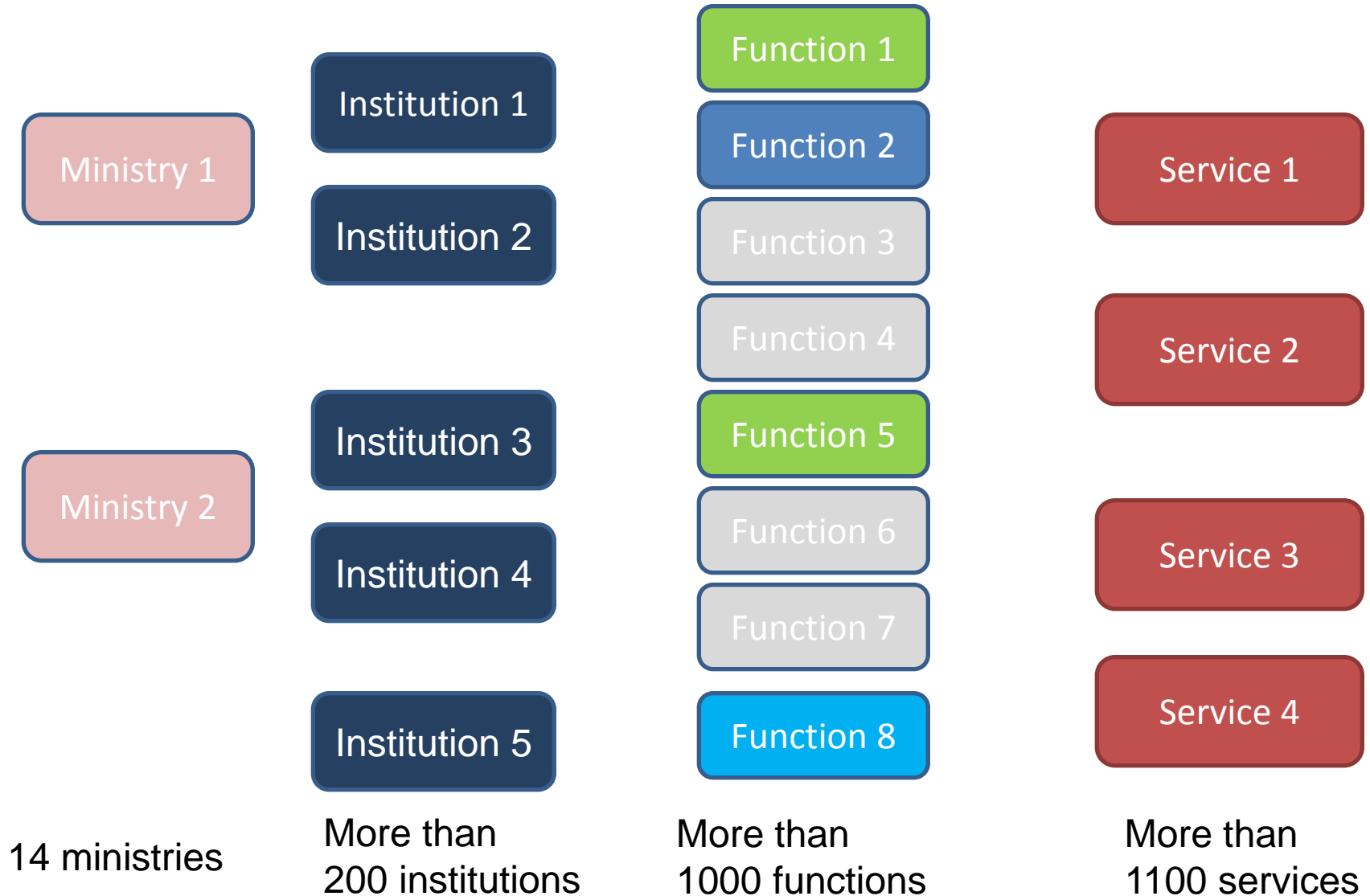
Hierarchic tree 2

Hierarchic tree 1

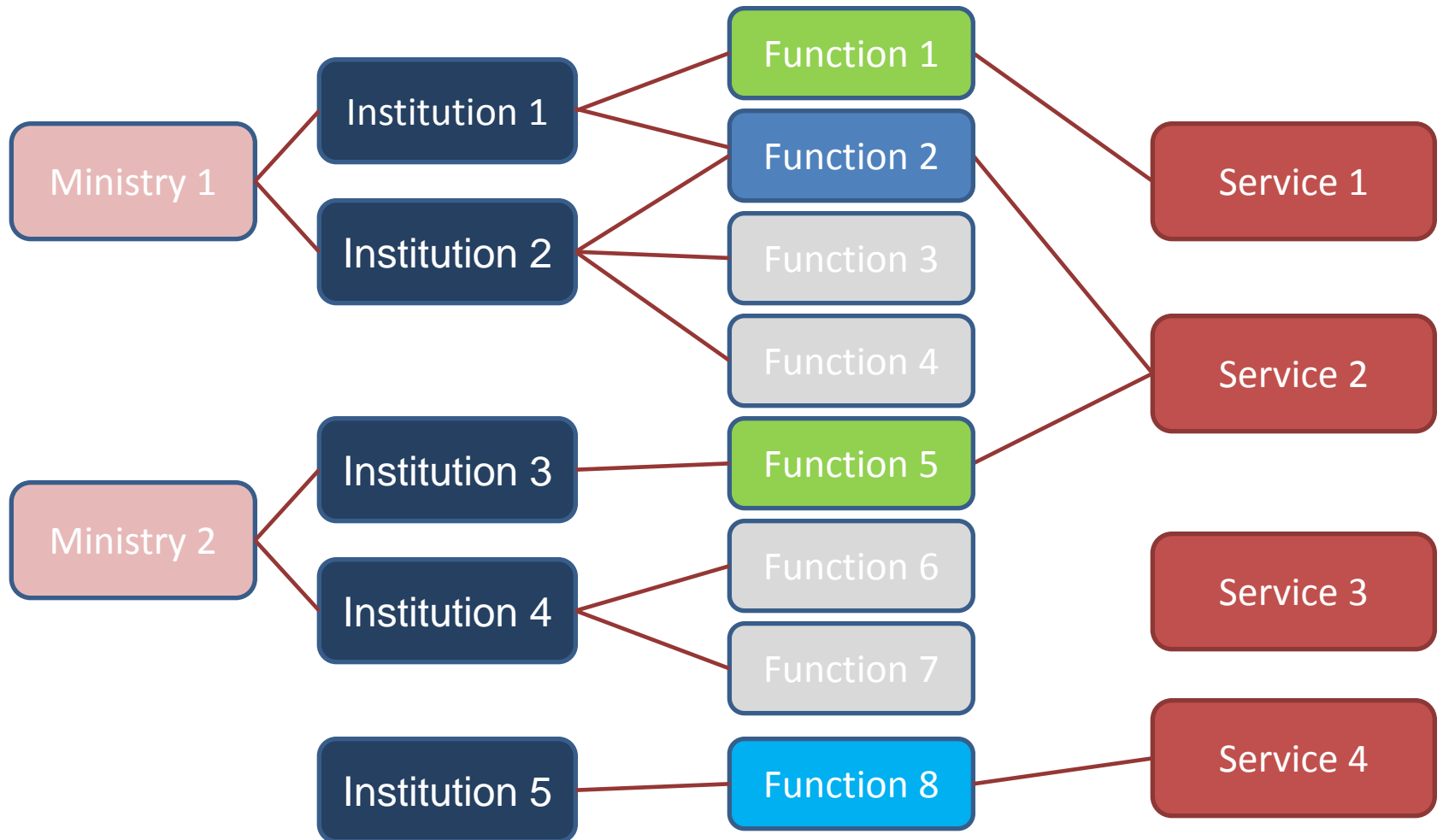
Entities and connections IV



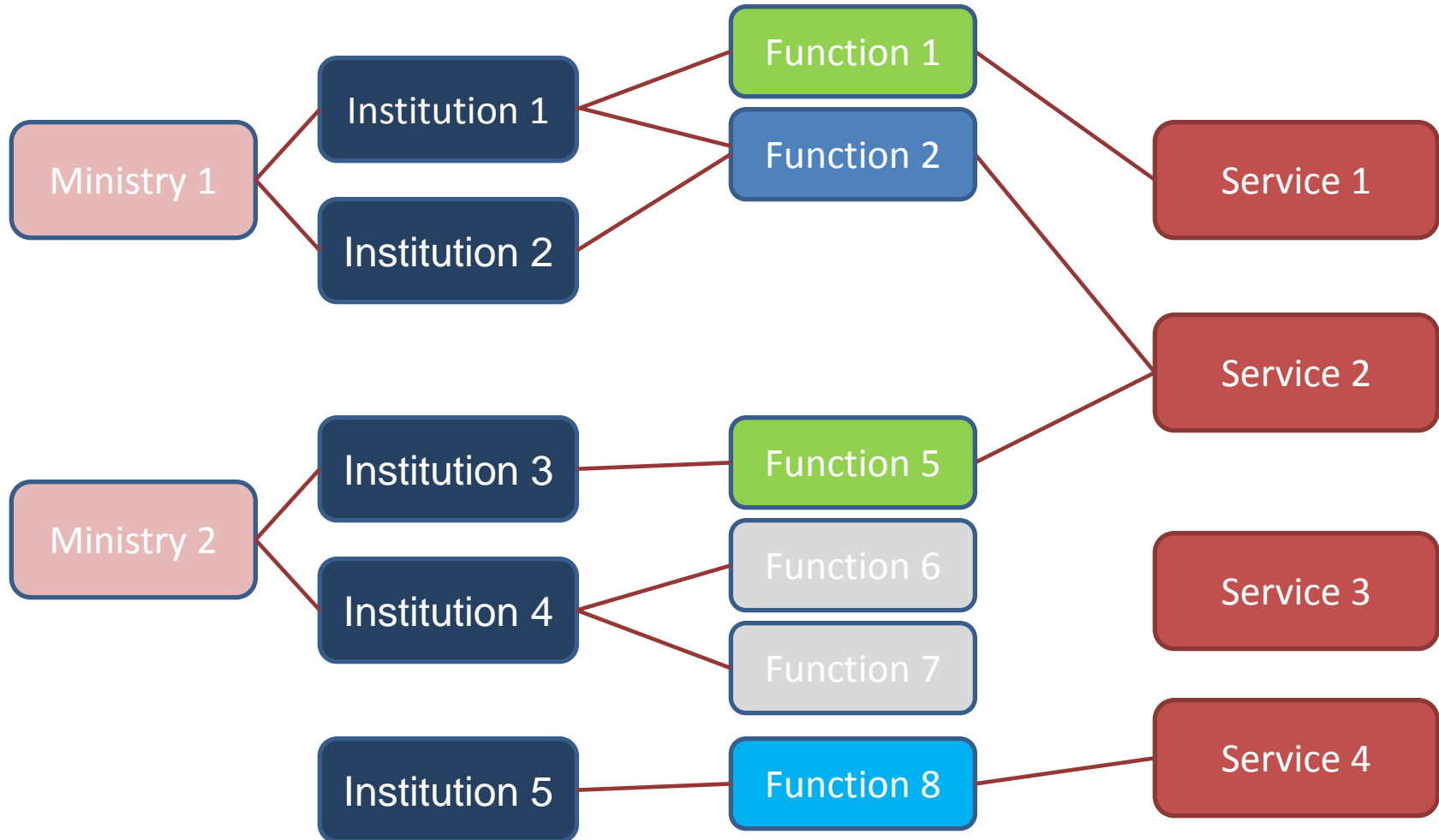
Public administration: institutions, functions, services



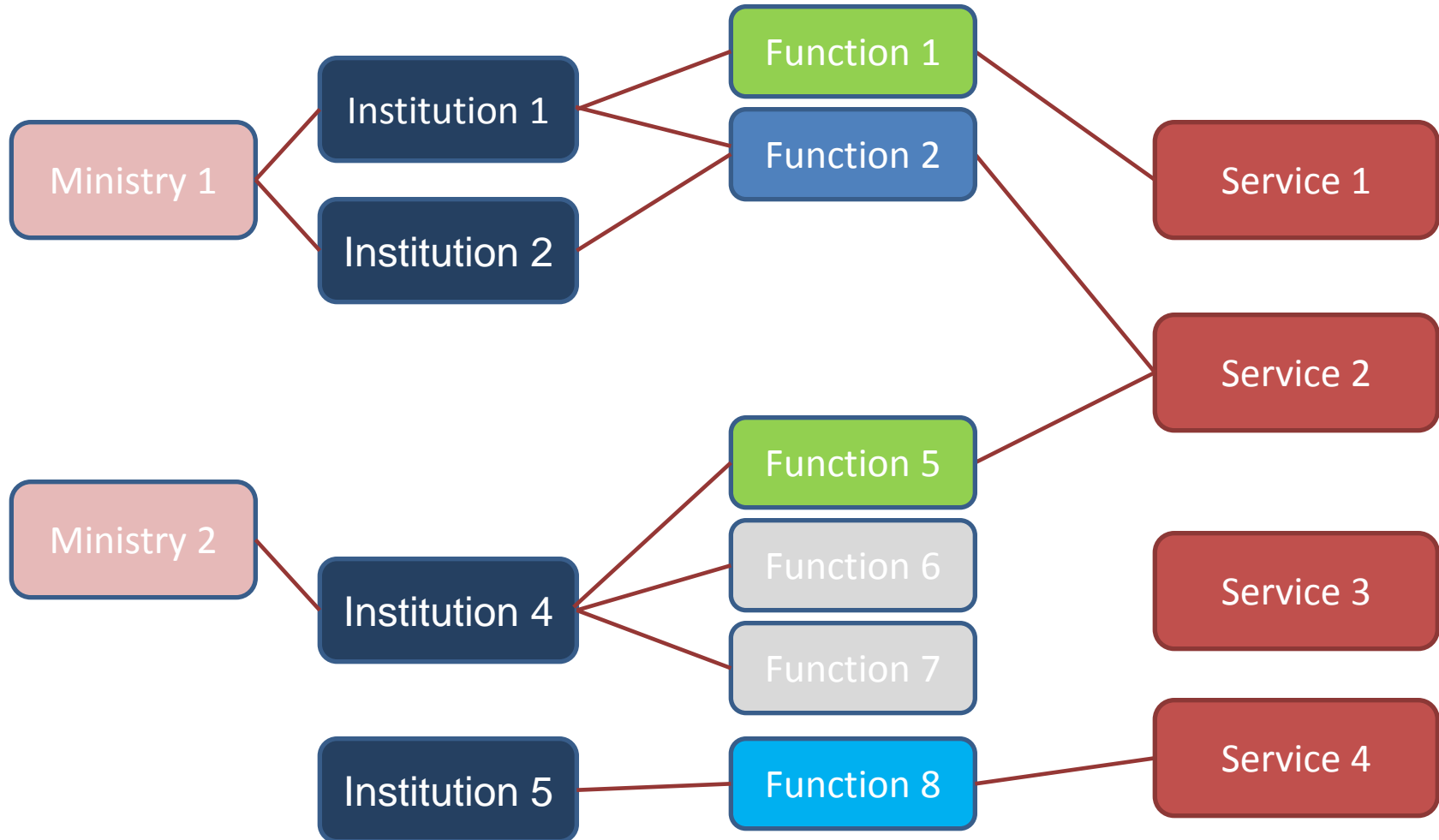
Structure of public administration: current situation



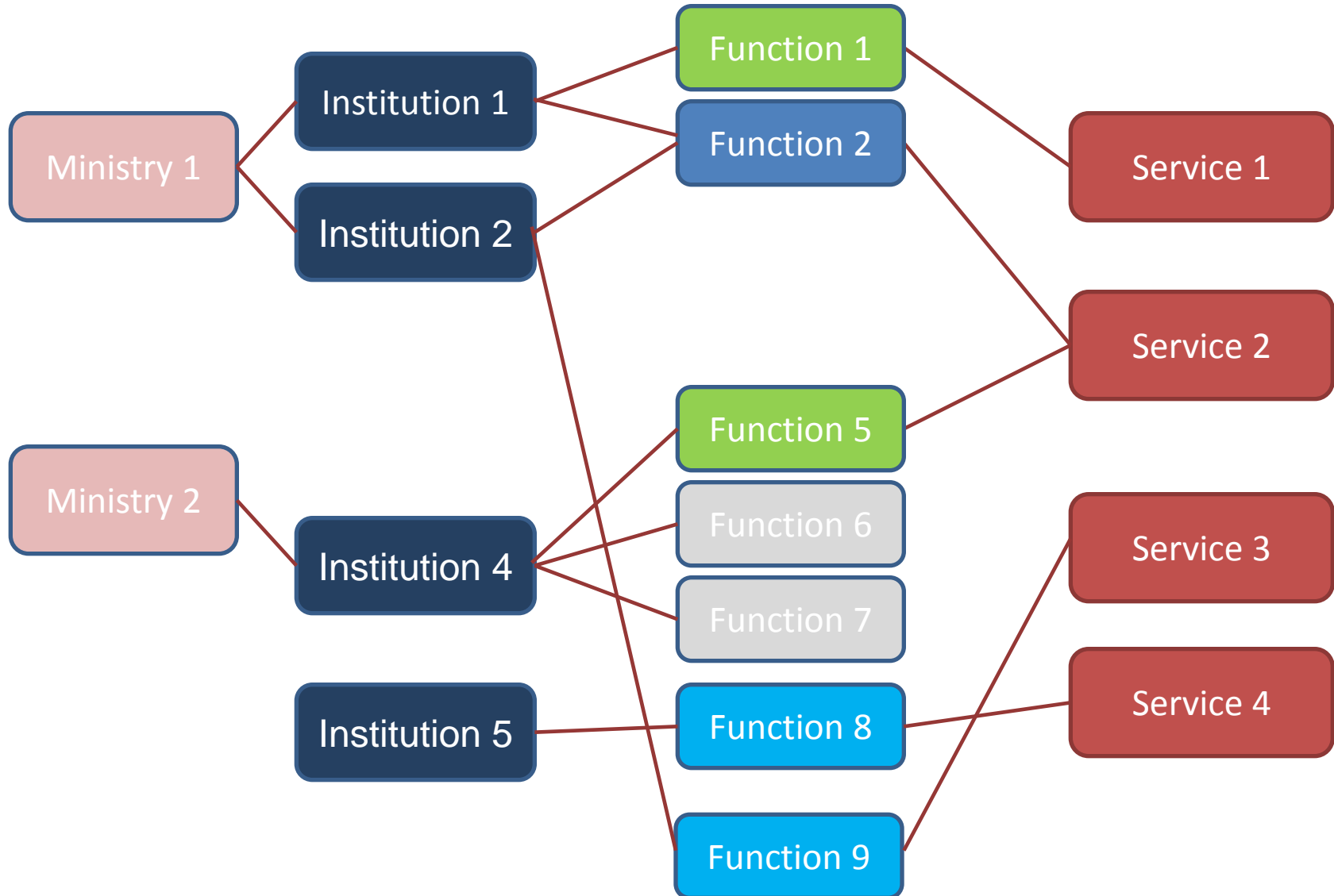
Structural reform of public administration: improvement I



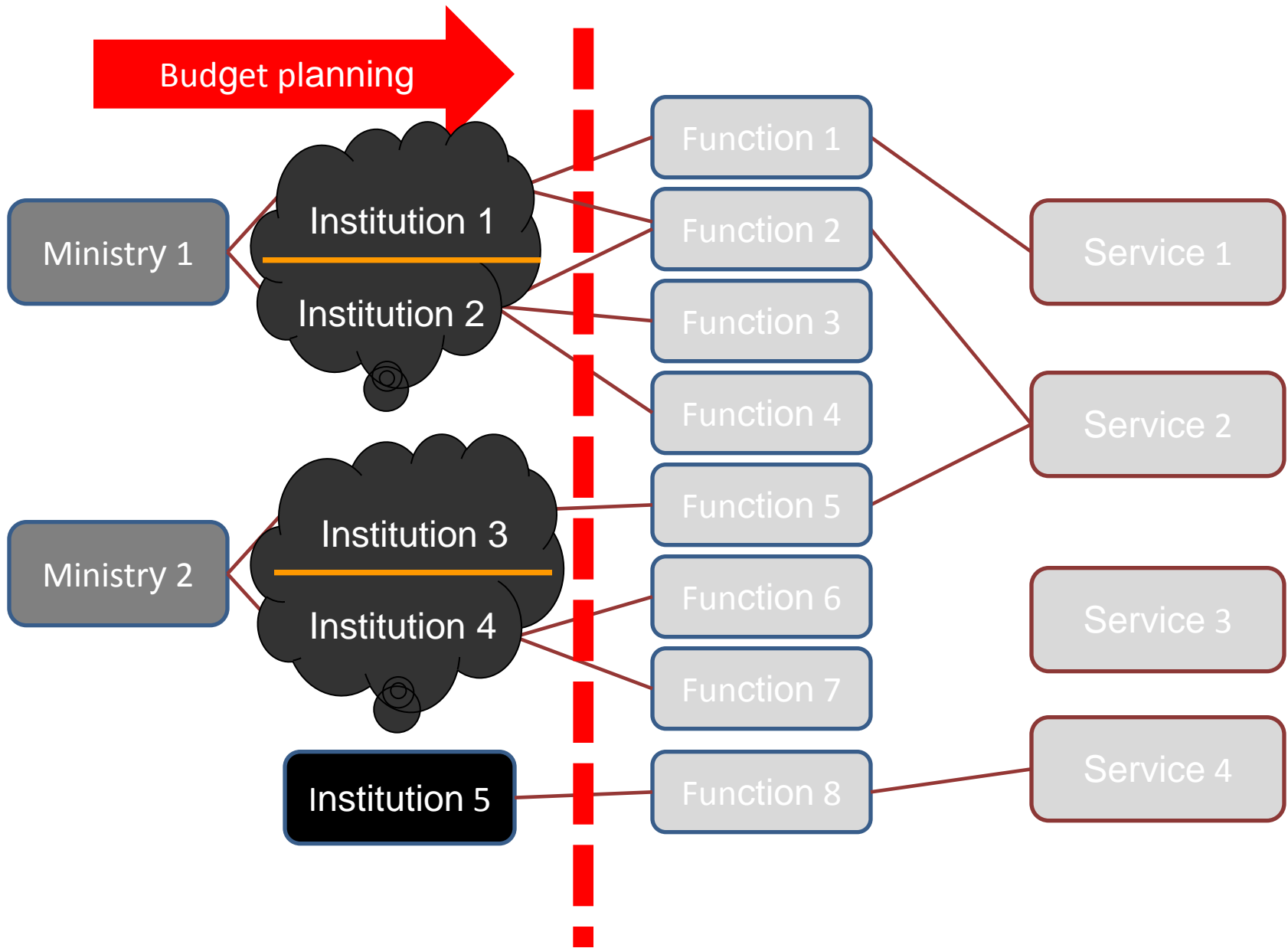
Structural reform of public administration: improvement II



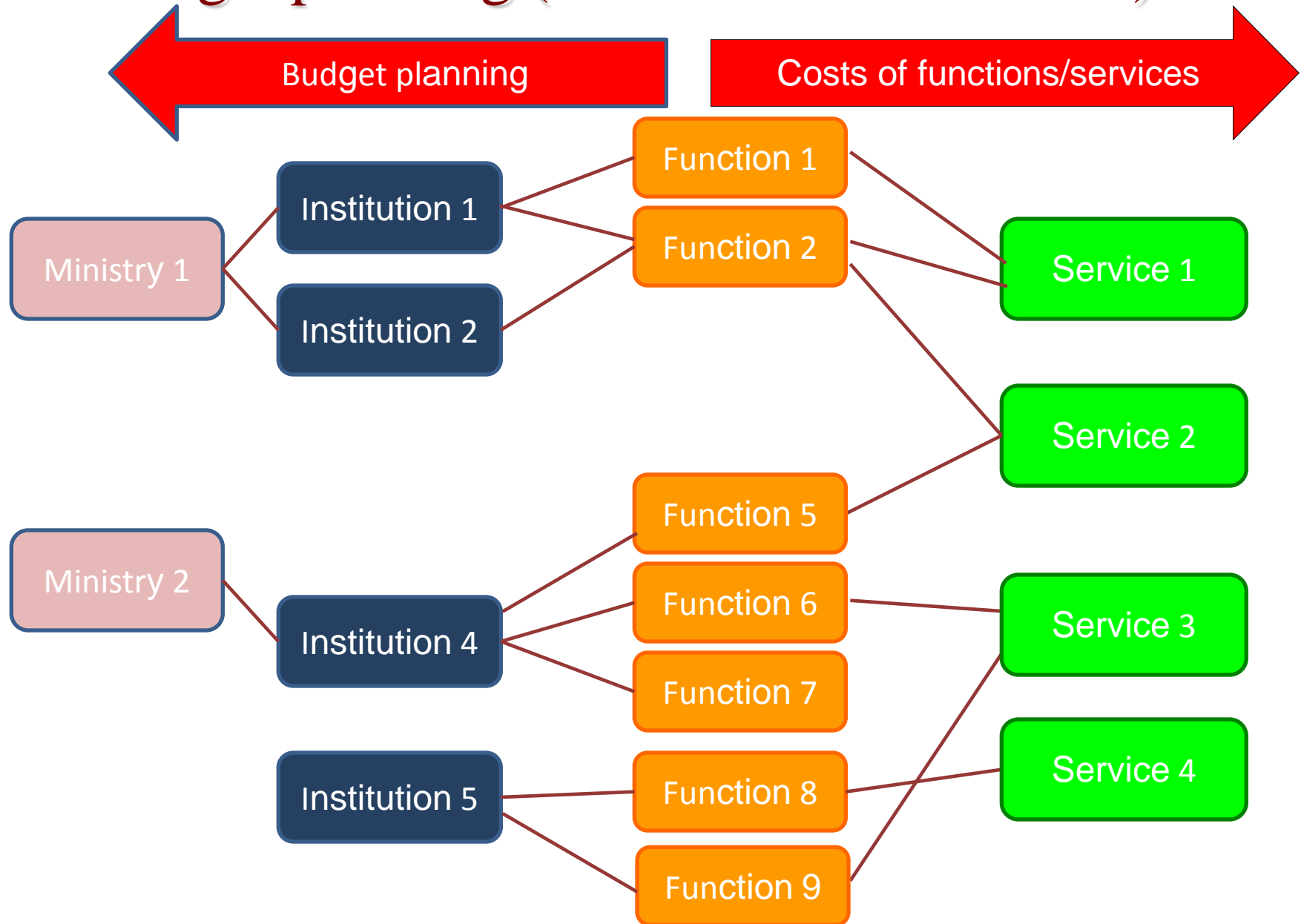
Structural reform of public administration: improvement III



Budget planning: is it optimum today?



Budget planning (after structural reforms)



Plans, service and executers

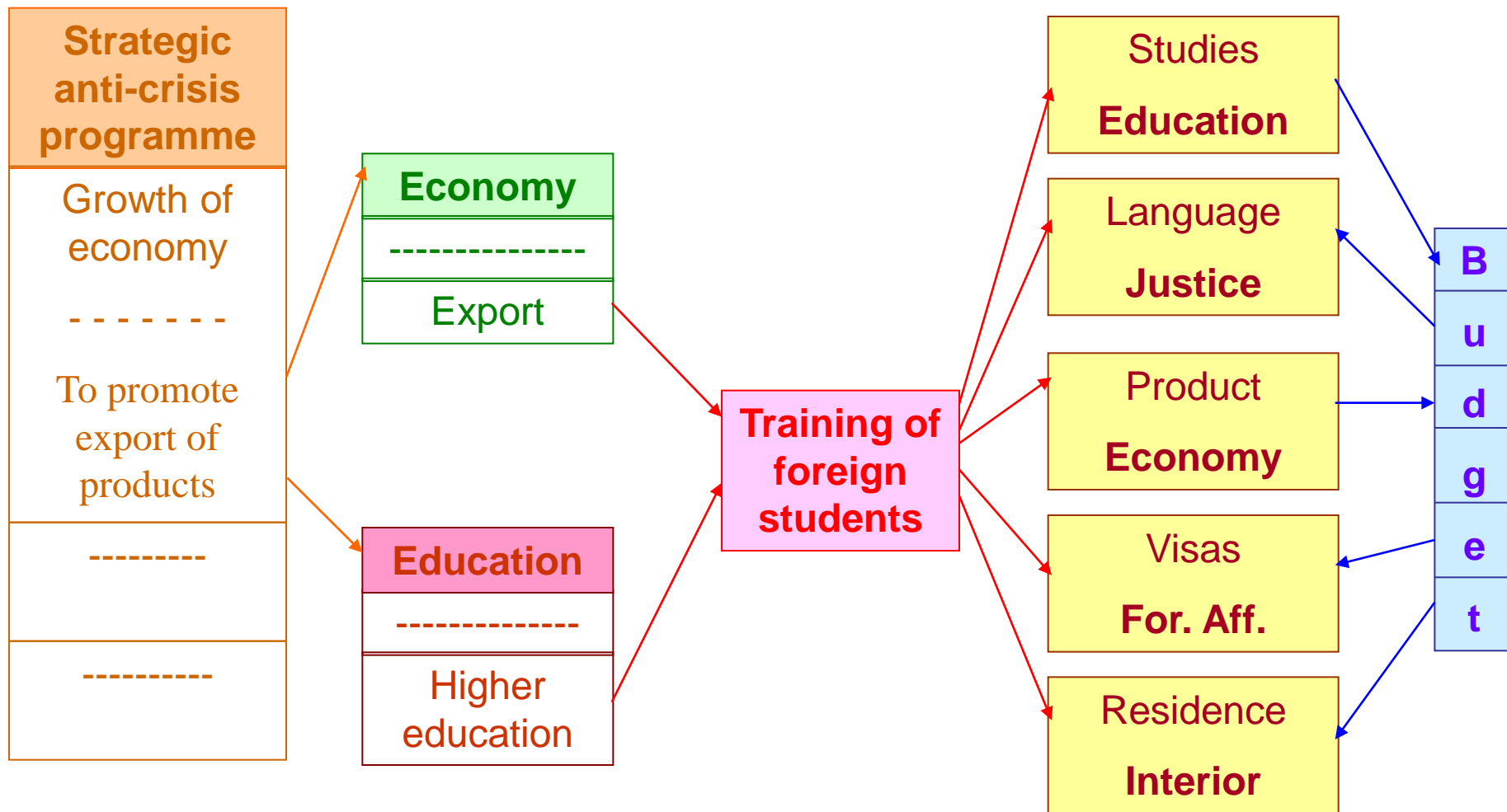
General

Sector/Region

Function/Service

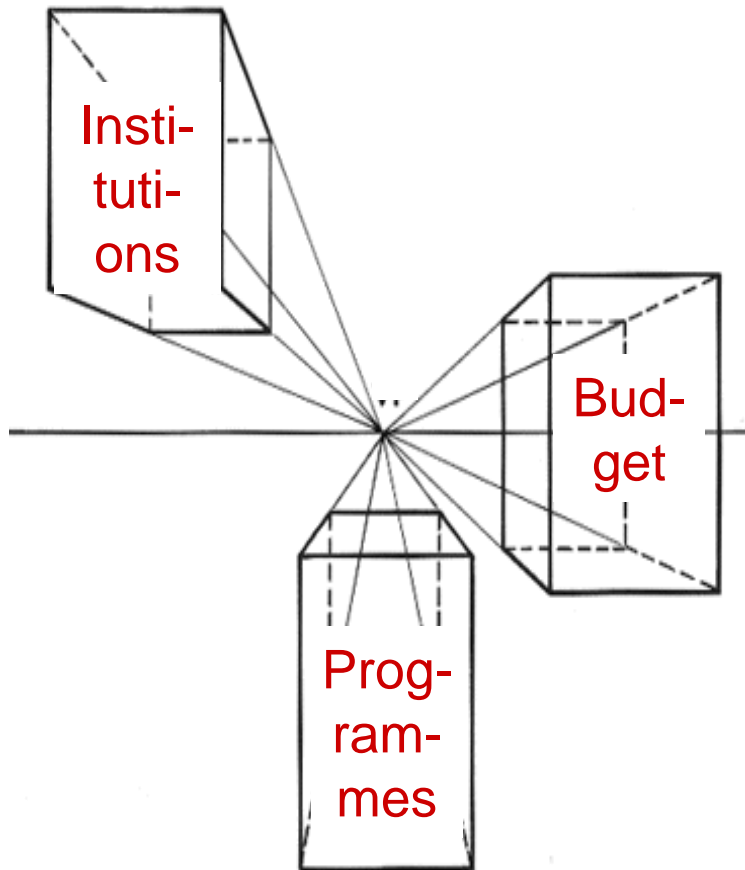
Ministry

Budget



Achievement:

strong consistency of entities from any perspective



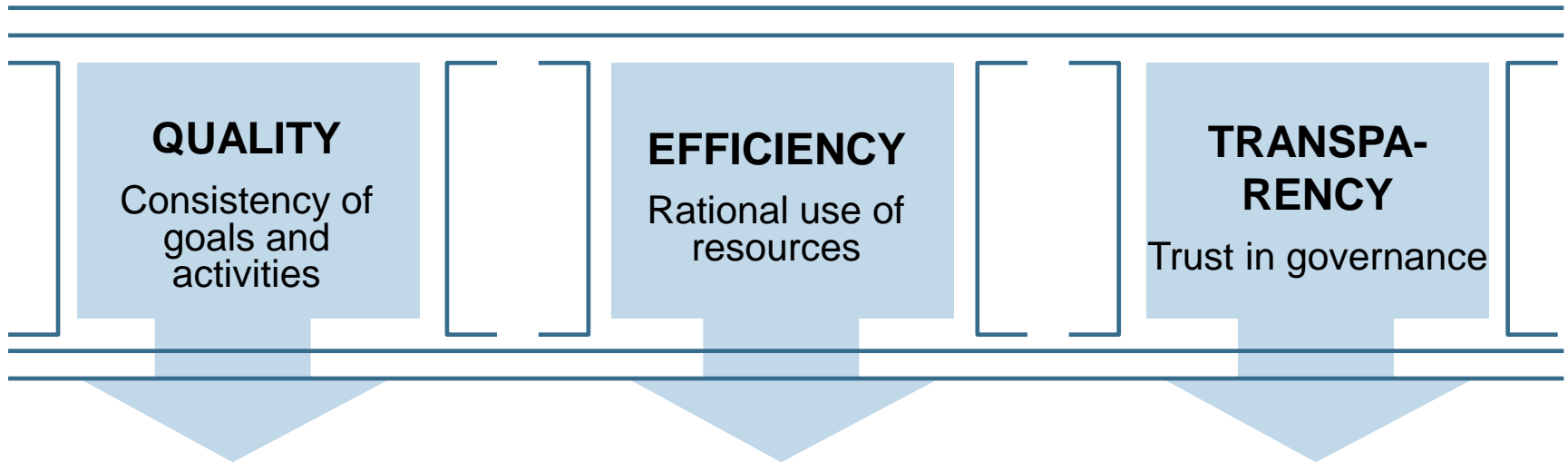
- issue of programme/plan –with activities, services, responsibility;
- activity – with responsible executer, financing, deadline, result;
- function/service – with executer, financing;
- institution – with performed activities, functions/services, financing, partners;
- budget – distribution by activities functions/services, institutions;

Applications and benefits

- definition of public functions and services on the basis of approved development goals and activities as well normative environment;
- evaluation and optimization of institutional structure of administration on the basis of necessary functions and services;
- creation of goal-based and task-based national budget;
- a real implementation control of planning documents;
- identification of necessary activities as well needless activities;
- adequacy of budgetary and institutional resources with performed activities, functions and services;
- analysis of administrative and management information from various perspectives;



Benefits and beneficiaries



Society



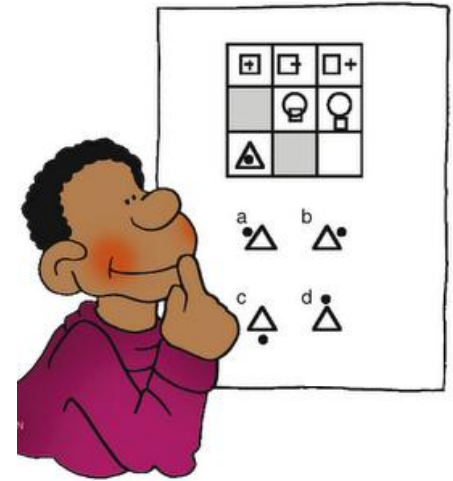
Budget



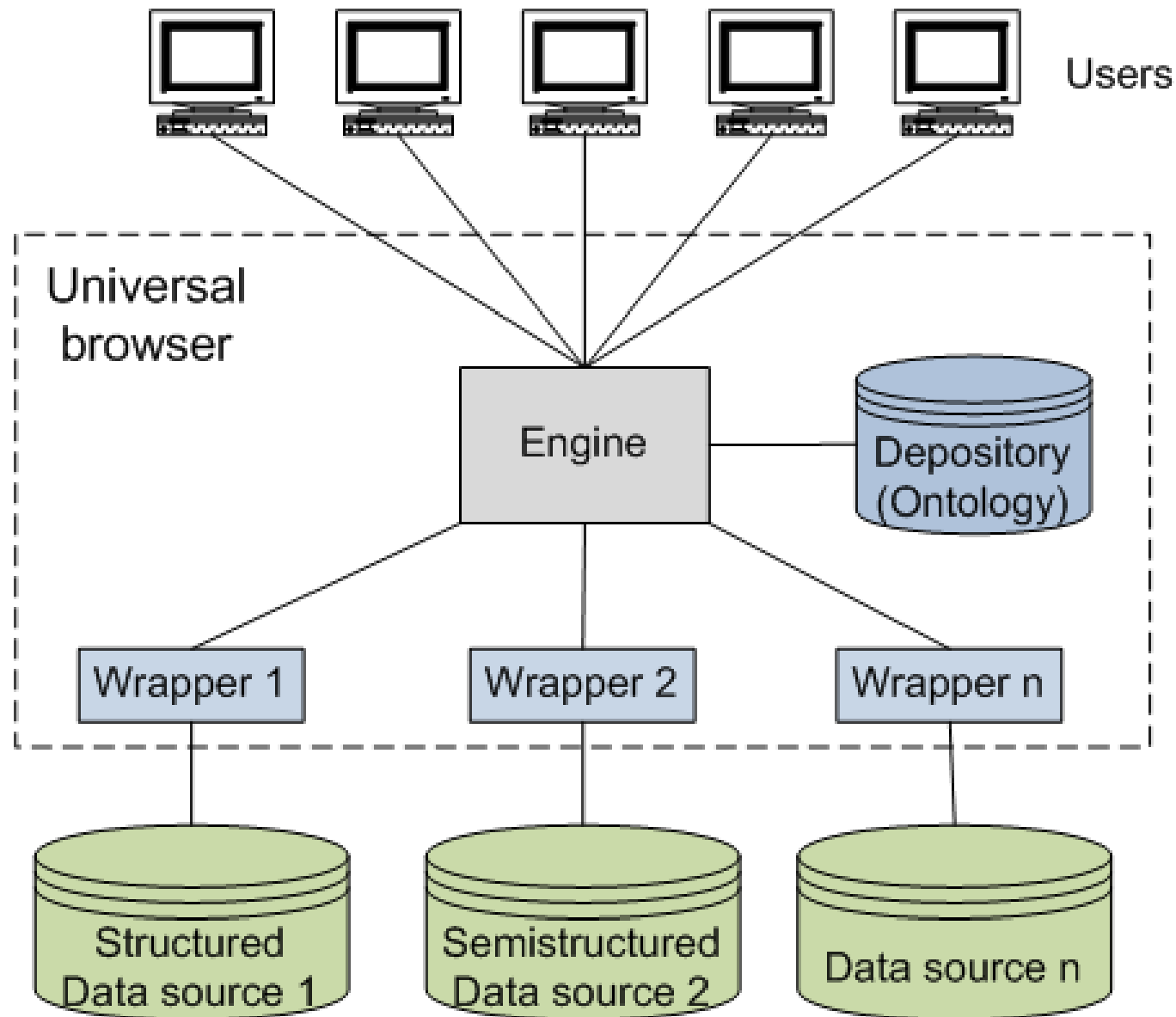
State
administration

Specific IT tools: support of managing activities

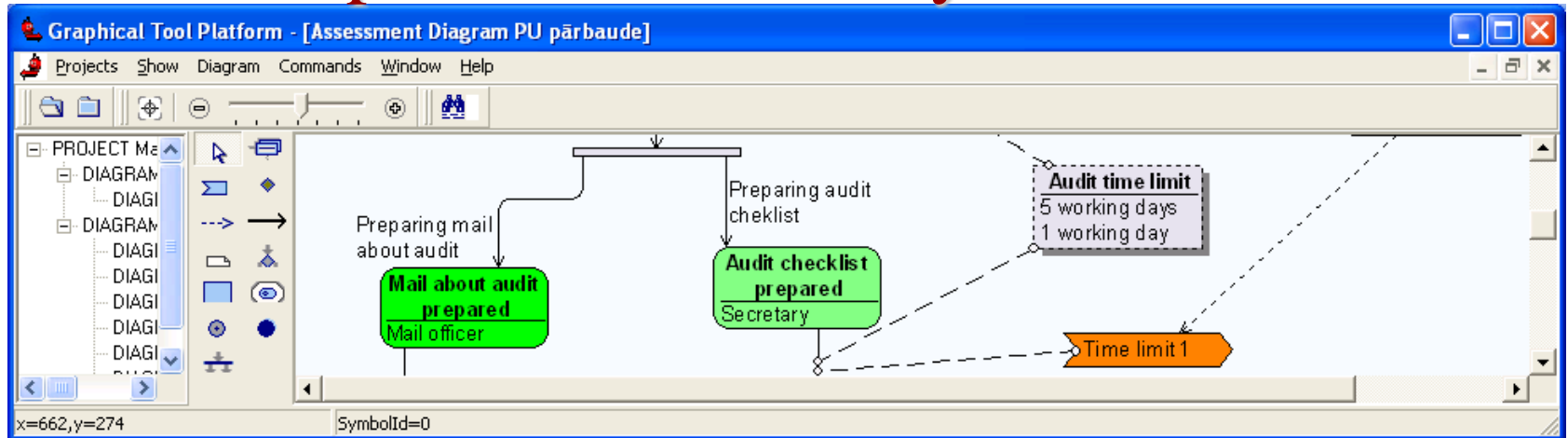
- creation and usage of united depository of logical units and their connections includes:
 - entry of objects in the depository;
 - decomposition of objects in elementary logical units;
 - relations of logical units of separate trees;
 - navigation on trees, expanding or shortening processed information when necessary;
 - navigation on connected trees according to defined relations;
- specific IT tools are needed:
 - to take into consideration individualities of the model;
 - to provide entry, maintenance and processing of information;



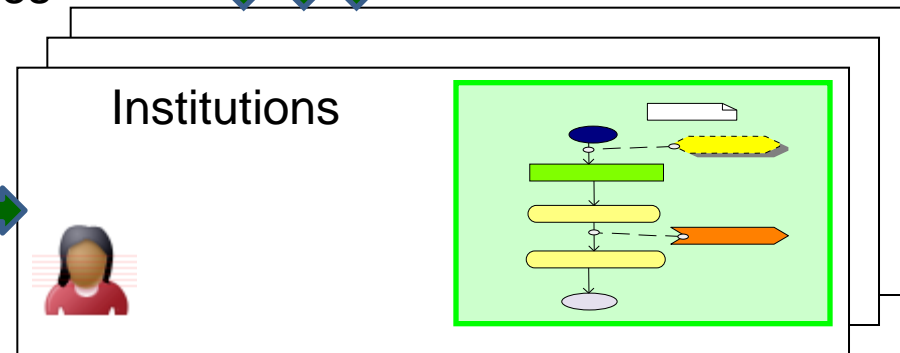
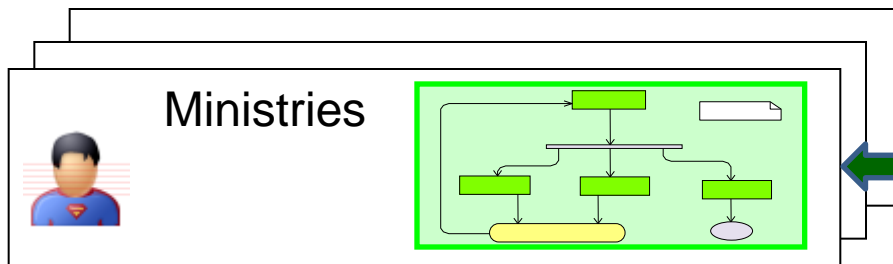
Specific tool for development and use of the model



Graphical user-friendly interface

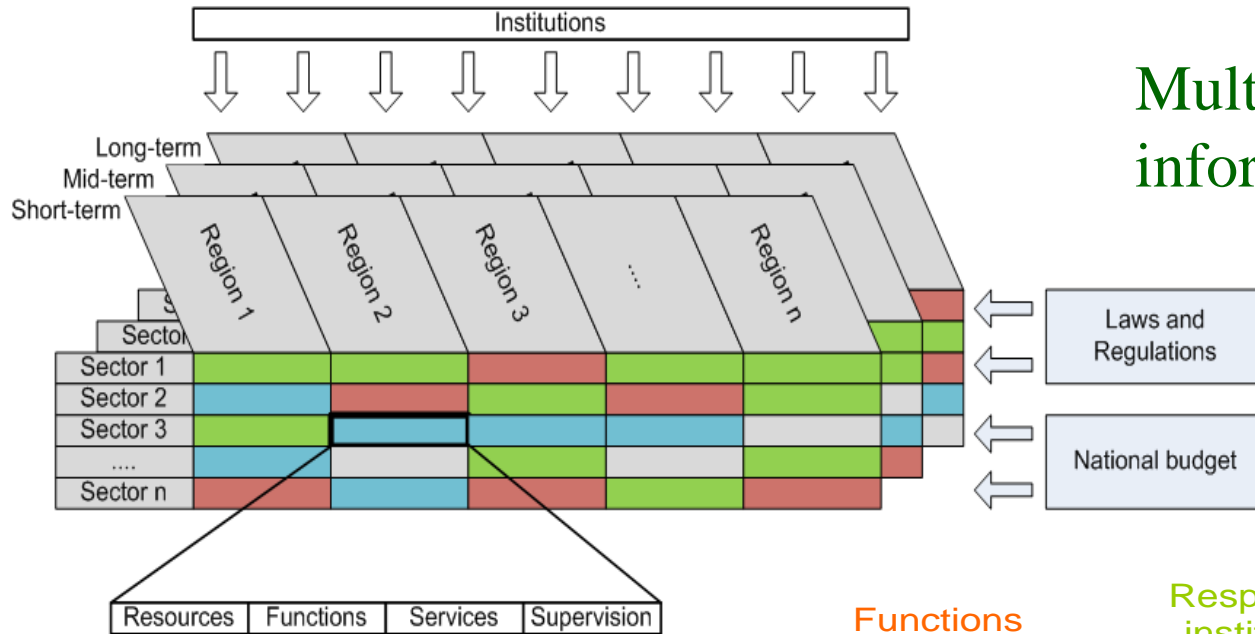


Domain Specific Languages



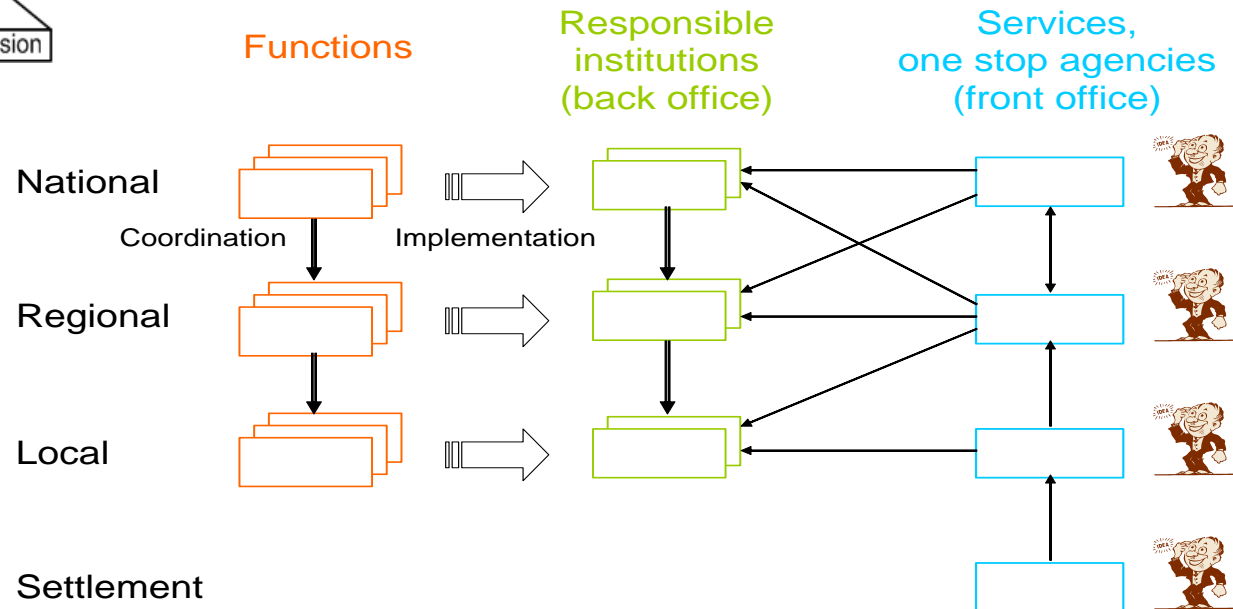
- DSL provide graphical modelling of administration processes and connection with external hierarchically structured information;
- states and/or processes can be gradually detailed;
- configuration of the necessary information as well external sources;
- each partner keeps its own autonomy, specific skills are not asked;

Arranged management of the country

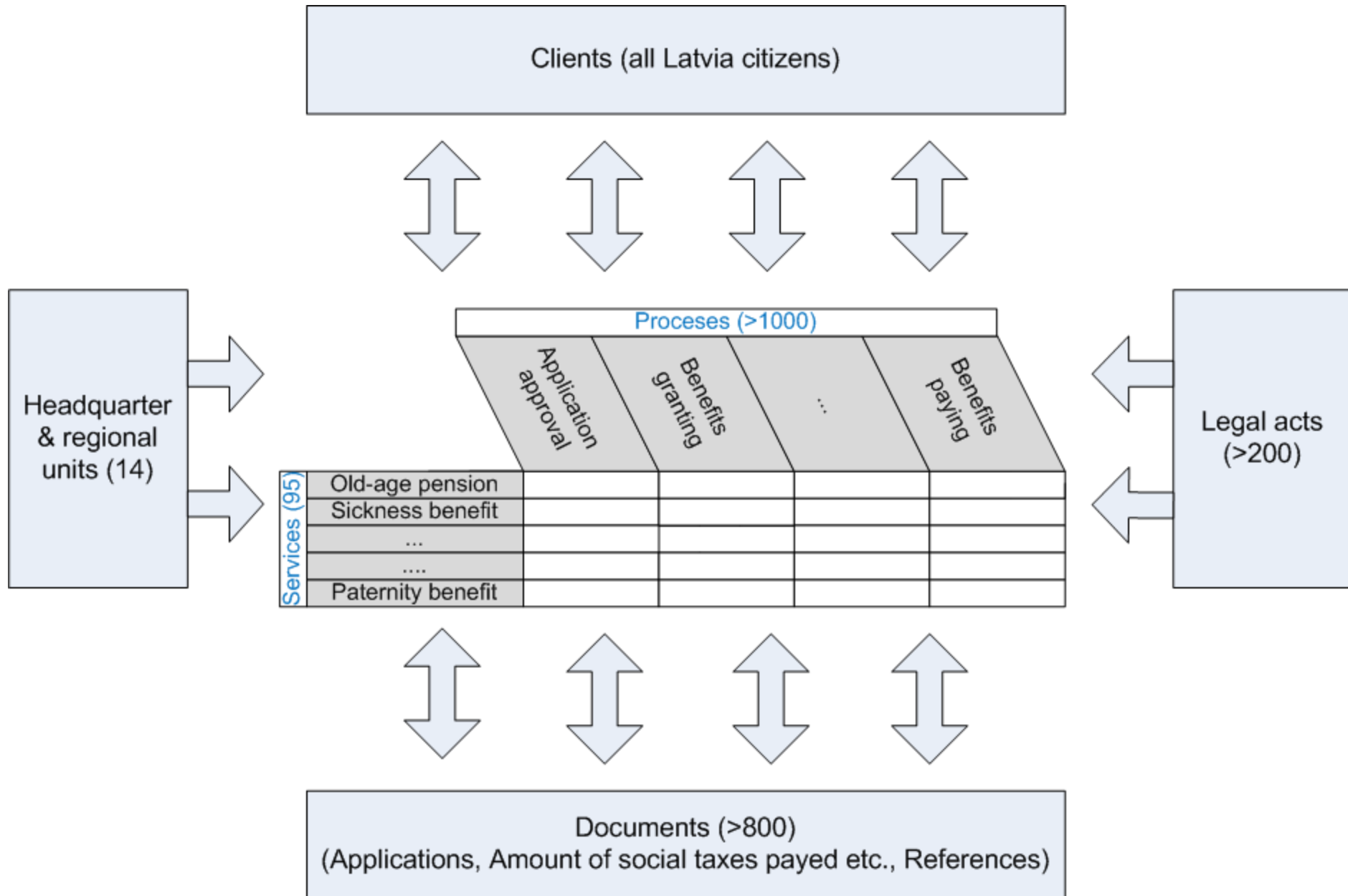


Multidimensional
informative model

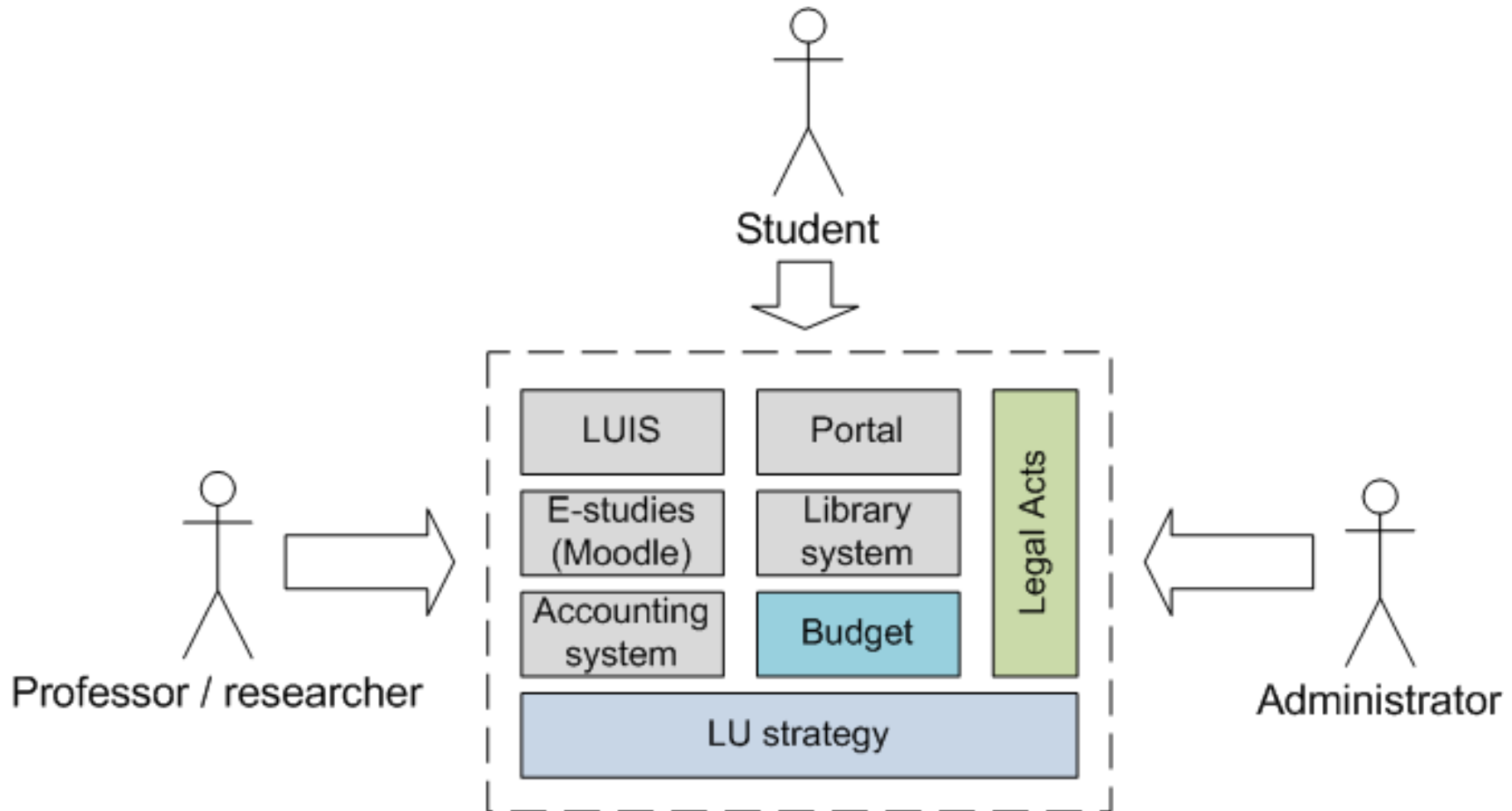
Advanced system of
public services



State Social Insurance Agency: informative model



University of Latvia: informative model



Thank you for attention!



Have a nice coffee break!