

Platform for the Integration of public Service

e-Government standard framework

(Korea Case)

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Before the start

There are long way to obtain e-Gov. Interoperability

◆ Radical and Hard Approach

- Setup **NCIA**

◆ Incremental and Soft Approach

- Launched steering organization
 - E-Government special Committee(**under the President**)
 - Committee on Administrative Information Sharing
- ITA/EA introduced pan-Government e-Government project
- **Common components and Standard framework introduced e-Government project**

Contents

- Understanding of Korea e-Gov. Framework setting project
- Detail Contents for Implementing common component and standard framework of e-Government
- Future Plans

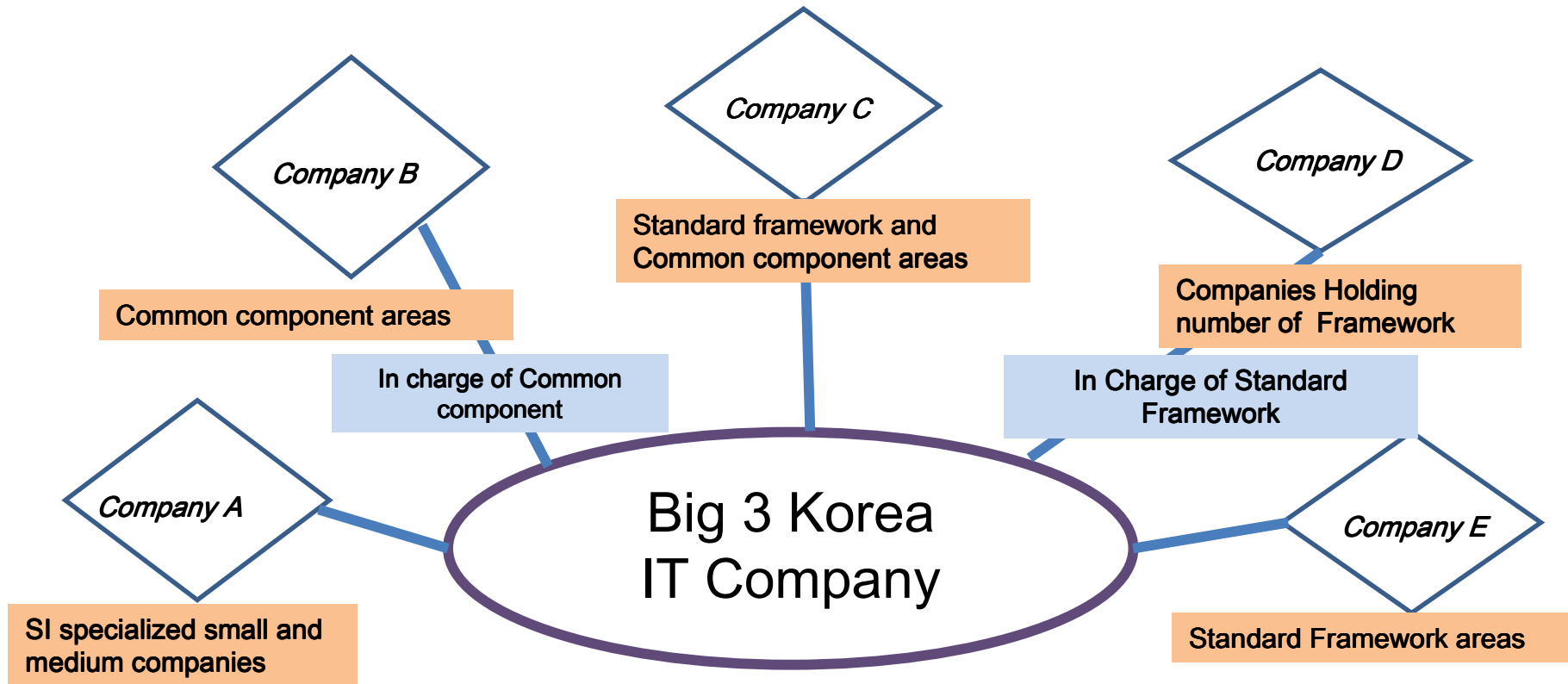
1. Understanding of Korea e-Gov. Framework setting project

- Project Summary
- Project Background
- Figure of Concept
- Project Scope
- Project progress's history
- Roadmap of Project

1.1. Project Summary

Name of project Project of building in 2 stages the e-Government's standard framework

Project Period 22nd of May 2009-30th of November 2009



1.2. Project Background

Improvement of quality in e-Government services and efficient information investment

Increase investment efficiency to national informatization

Security competitiveness to SI small-medium companies

Providing base circumstance of advanced countries' national informatization

Enhance reusability of existing common components

Development of common component and standard framework

Activation of common component and standard framework

Building and applicable requirement common component of Next generation e-Government and standard Framework

Insufficient usage plans of common components

Duplicate development of informatization project in each organization

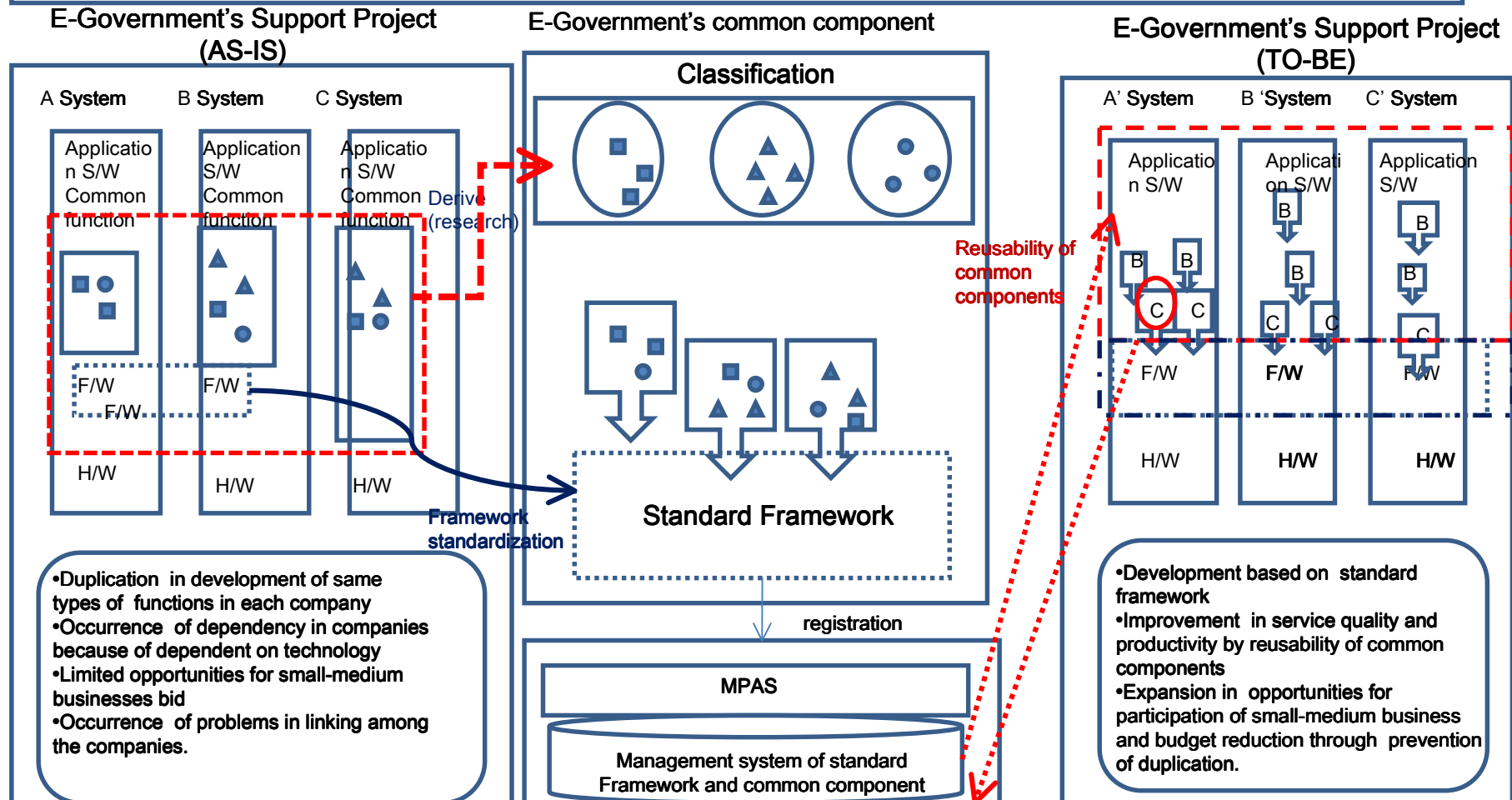
Need in common development base which is optimized/standardized

Growth of specific companies is a reason for declining business competitiveness & budget waste in business change

Declining in reusability, interoperability among systems because of absence in development standardization

1.3. Figure of Concept

Expansion of opportunity by participation small-medium companies and reduction budget through reusability common components and standard Framework



1.4. Project Scope

The project realizes Standard Framework's management environment , development environment and Common Components and supports activation for implementation/utilization of Standard Framework

Building Standard Framework and standard Common Component of e- Government

<p>Realization management environment for support the spread of Standard Framework Application</p>	<p>Development implementation tools performing more convenient and easier Coding then Developers</p>
<p>Development of present conditions management, configurations management/ SR management's functions of Framework</p>	<p>Formulation of Source Code in 1st generation's business development environment, supplement source code checking functions</p>
<p>Definition of development standards of Common Component and Development (<i>30 types of new Common Component</i>)</p>	<p>Supporting plan for activation</p> <p>Training for introduction/ practical use of Standard Framework (10 times)</p>
<p>Finding new Common Components</p>	<p>Support application to e-Government and public informatization projects.(10 projects)</p>

1.5. Project progress history

Project Initiation and Reporting

- Project initiation : '08.11.28
- Initiation Report : '08.12.10
- Interim Report : '09.04.01

Business analysis, design and development

- Operation environment
 - Establishment of an open-source selection criteria, complete development of the operation environment (34 services).
 - Completion in development of the operation environment template program.
- Development environment
 - Completion in development of a Framework Development environment (9 services).
- Common component
 - Establishment activation plan of an existing Common Component.
 - Completion in development of 142 kinds of common components (a common technique (67 species), element technology (75 species)) .
- Verification
 - Completion the existing UDDI data integration.
 - Completion in development of the eGovFrame Portal.

Control

- Resident control
 - Period: 1.28-5.27(2 experts from information system administration of Korea)
- Internal and External Control (Administration)
 - Internal control period: 2.23-2.26 (3 people from SDS company)
 - External control period: 3.2-3.6 (6 people from information system administration of Korea)
- Final control
 - Period: 4.17-4.24 (7 people from information system administration of Korea)

Advisory Council Operating

- Formation of Advisory Council: Government (2), academic (5), industry (22), related agencies (3)
- 1st Advisory Council hold ('08.12.17)
 - Description:* president election, operation plan, criteria for selection Open Source, F / W requirements for convergence.
- 2nd Advisory Council hold ('09.1.14)
 - Description:* Selection Framework Open Source, 15 types of development plan of Common Component.
- 3rd Advisory Council hold ('09.2.11)
 - Description:* Connection Service standardization plan, Common Component and F/W Test plan.
- 4th Advisory Council hold ('09.5.11)
 - Description:* Activation the Management System of Common Component and Standard Framework, education and publicity.

Subcommittee operating

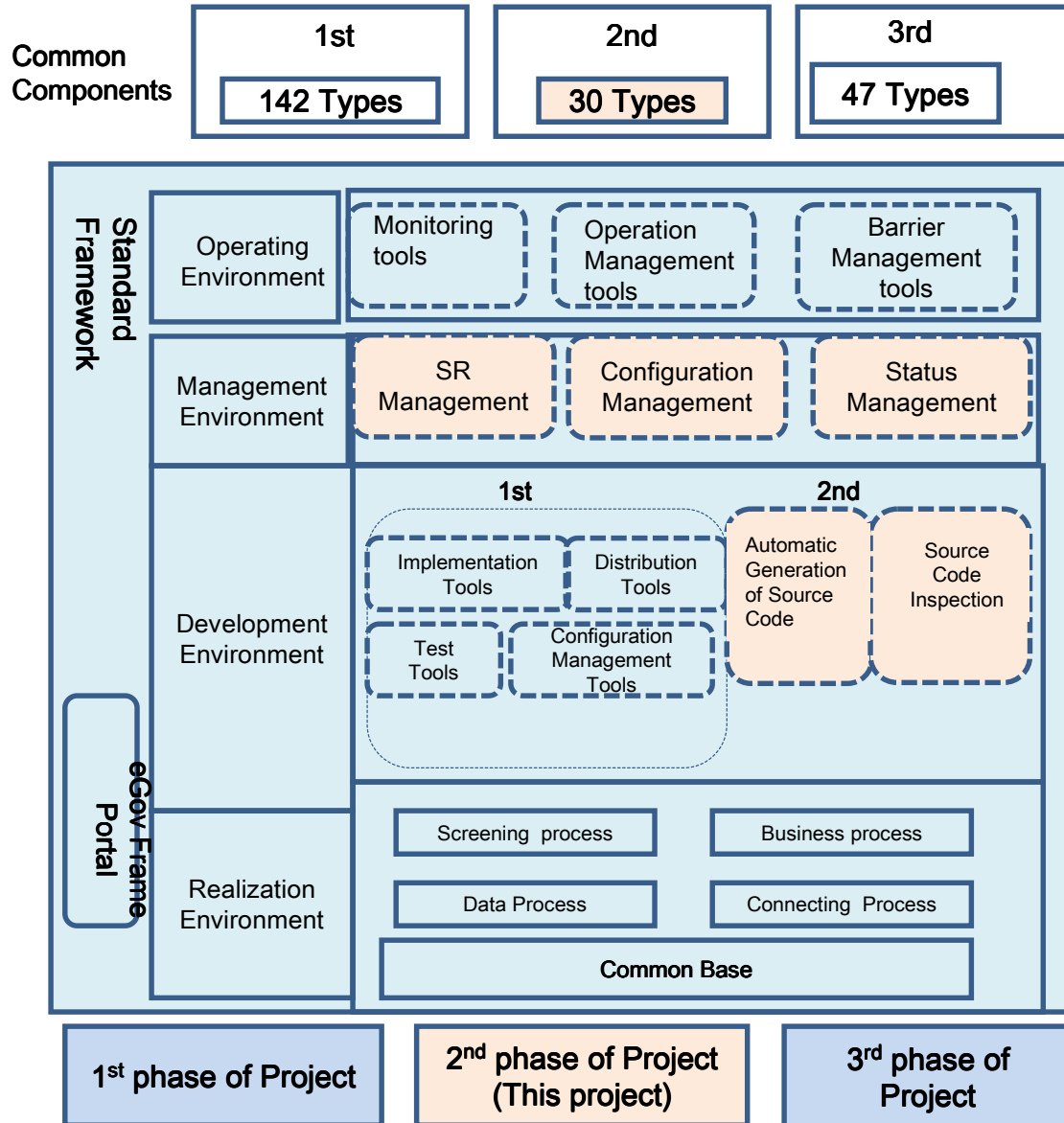
- Formation of Subcommittee and establishment of operation plan('09.2.12)
 - Organization:* academic(2), Ministry of Administration Security(2), NIA(1), industry(4), development agency(1)
- 1st Subcommittee hold('09.2.25)
 - Description:* Share the operation direction of Subcommittee, and convergence the operation related opinions
- 2nd Subcommittee hold('09.3.3)
 - Description:* Presentation and discussion the results of information gathering and case analysis.
- 3rd Subcommittee hold('09.4.15)
 - Description:* Common Component and Standard Framework activation plan

Conduct Workshop

- Conduct e-Government Standard Framework Workshop
 - Period: 3.11-3.14
 - Description:* Establish a plan for activation e-Government Standard Framework

1.6. Roadmap of Project

Common Components and Standard Framework implementation through each business stage



	2008 (1 st phase)	2009 (2 nd phase)	2010 (3 rd phase)
Standard Framework	<ul style="list-style-type: none"> ● Realization Environment Development -Screening process, Business process, Data process etc. provides each layer standardized realization environment. ● Development Environment (1st) -Implementation tools (Editor, Debugger), Distribution tools, Test tools, Configuration & Management tools, etc.(Development tools) 	<ul style="list-style-type: none"> ● Management Environment Development -Provide management environment for Standard Framework and Common Component application support ● Development Environment (2nd) -Further Development Automatic code Generation, Code inspection, etc. (Implementation tools) 	<ul style="list-style-type: none"> ● Operating Environment Development -Provide Environment for Operational Management as monitoring, program control etc. in realization of environment
Common Components	<ul style="list-style-type: none"> ● Development 142 types of Common Components as login, user management etc. 	<ul style="list-style-type: none"> ● Development 30 types of Common Components as my page, pop-up window etc. 	<ul style="list-style-type: none"> ● Further development 47 types of Common Components as document management etc.
Activation		<ul style="list-style-type: none"> ● Priority support 95) ● Base support (5) ● Perform training (10) 	<ul style="list-style-type: none"> ● Standard Framework Application more than 10 of new public information project.

2. Project Promotion Details

- Standard Framework Development
- Common Component Development
- E-GovFrame Portal building
- Expectation Results

2.1. Standard Framework Development - (1) Framework Overview

Framework is a base or frame structure of certain things and often uses as a skeletal structure in buildings; base structure in document and system

Definition of Framework from Dictionary

1. Is a base or frame structure of certain things; often in building skeletal structure, which is a base of Framework.

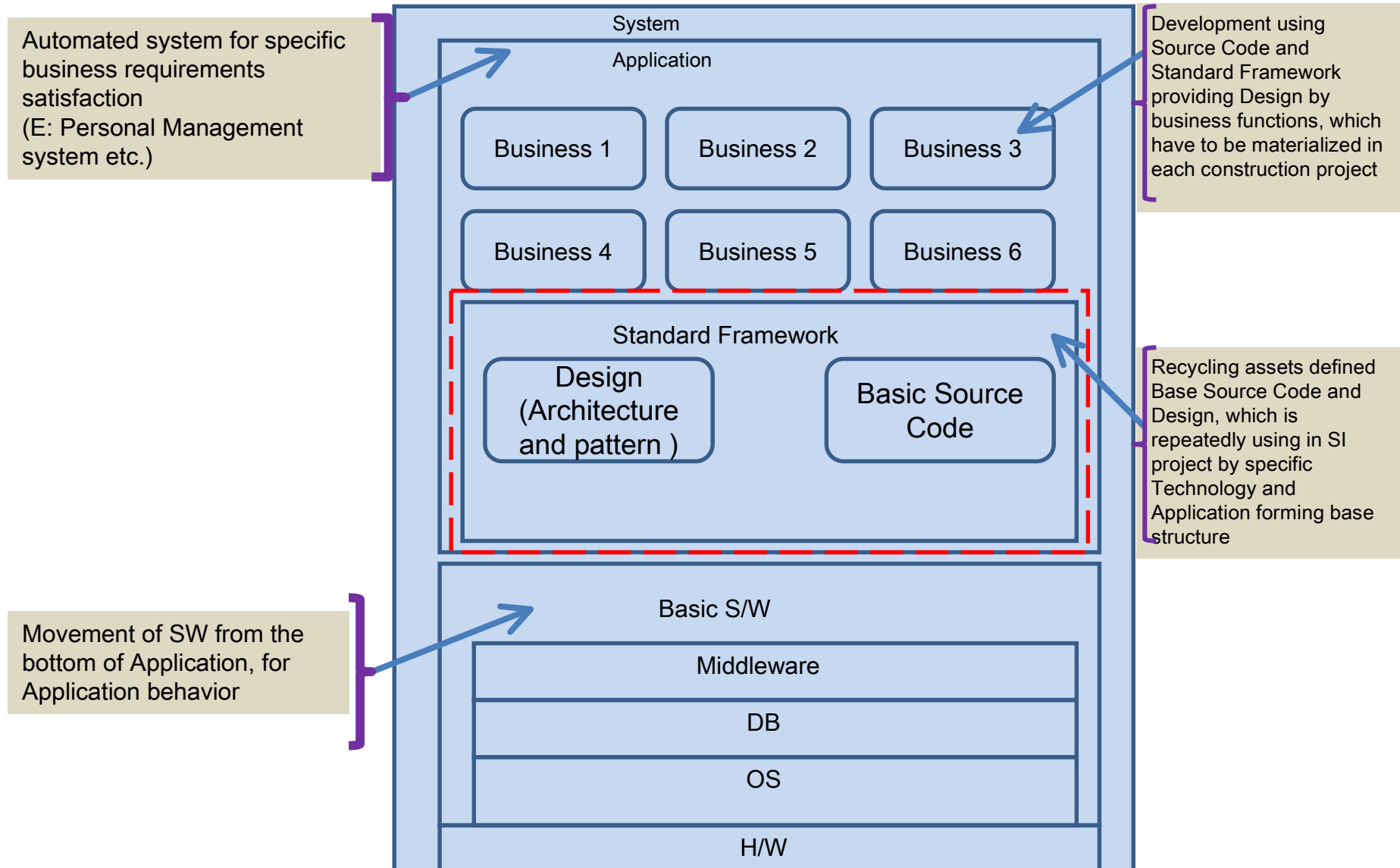
2. Is a base structure in document and in system

From the American Heritage Dictionary

	Building Framework (Steel structure)	Standard Framework	EA Framework
Definition	<p><u>Skeletal structure of building:</u> Constructing and connecting structure based on rivets or bolts, welding etc. by using steel materials as section steel, sheet steel and many more</p>	<p>Support of reuse in large scale then class as a set of classes implementing abstract design for solving serial problems</p>	<p>Communication mechanism for providing consistent point about EA by providing model for Enterprise Architecture established (matrix) reference model, Management systems, Tools, Basis/ Standards, Methodologies, Indicator etc. achman, FEAF, TEAF, TOGAF etc.</p>
Remark	<p>Non-conceptual reality-based structure with skeletal structure in building and application etc.</p>		<p>Advertisement system structure for systematic analysis and access about conceptual problem and form</p>

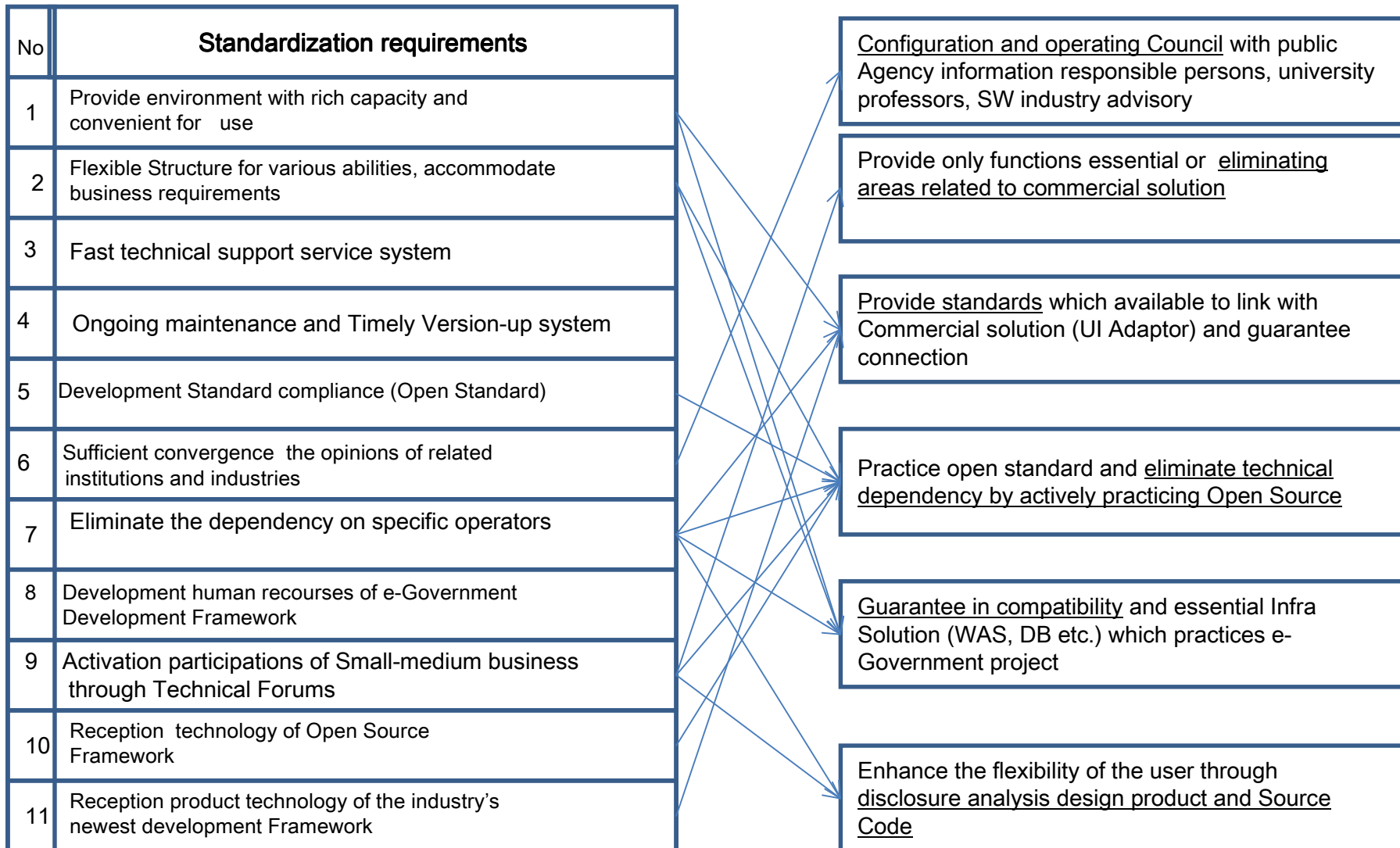
2.1. Standard Framework Development - (1) Framework Overview

E-Government Standard Framework definition : Collection of Source Code and reusable Design supporting application development



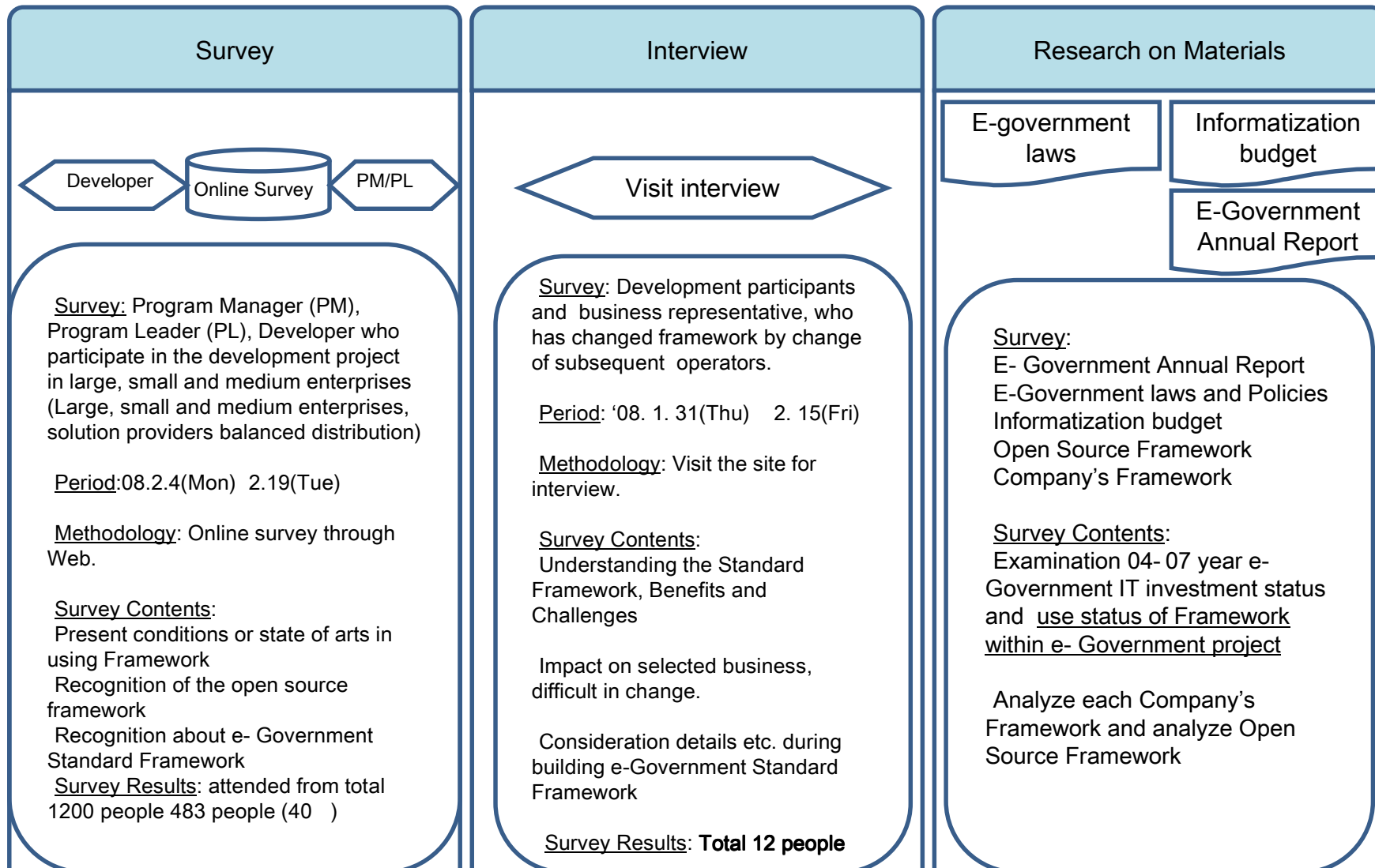
2.1. Standard Framework Overview- (2)Standardization principles

Examination the National Standardization requirements and creation Standard Principles for it's satisfaction with the next written:



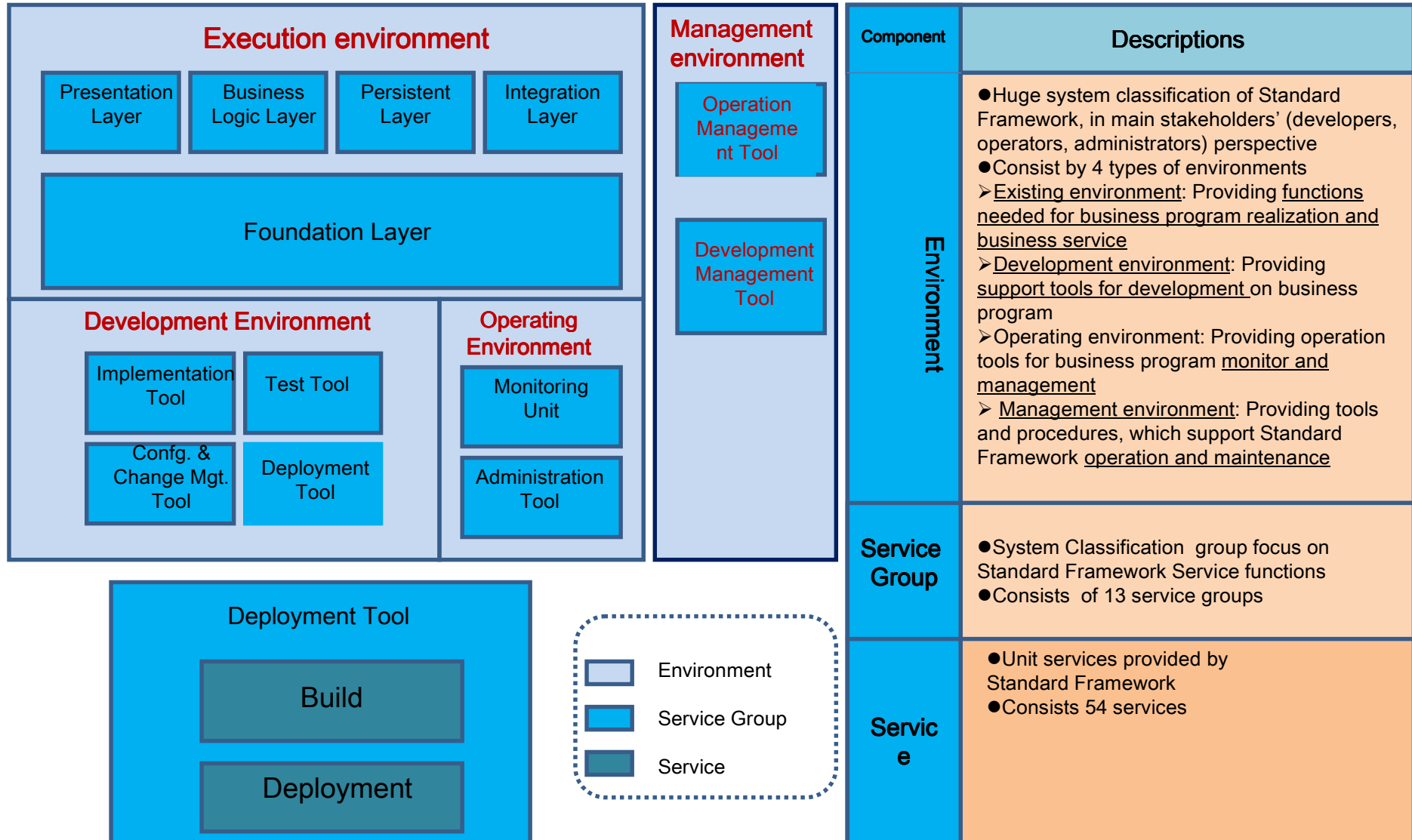
2.1. Standard Framework Development - (3) Status examination of using the Framework

Execution survey, interview and material research for status examination of Framework using in e- Government project



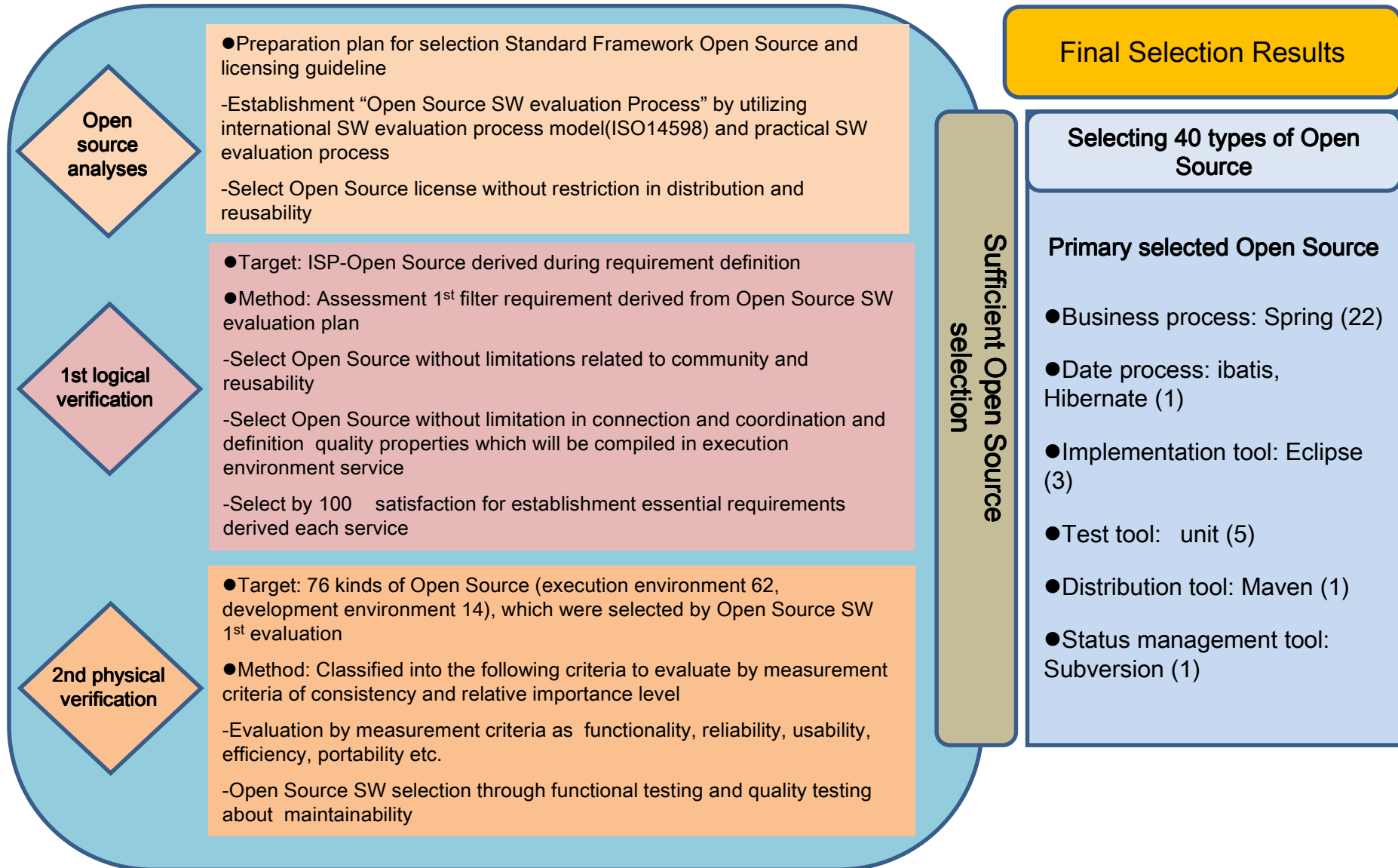
2.1. Standard Framework Development - (4) conceptual architecture

Configuration Standard Framework realization, development and operation etc. in 4 environment, 13 service group and 54 services



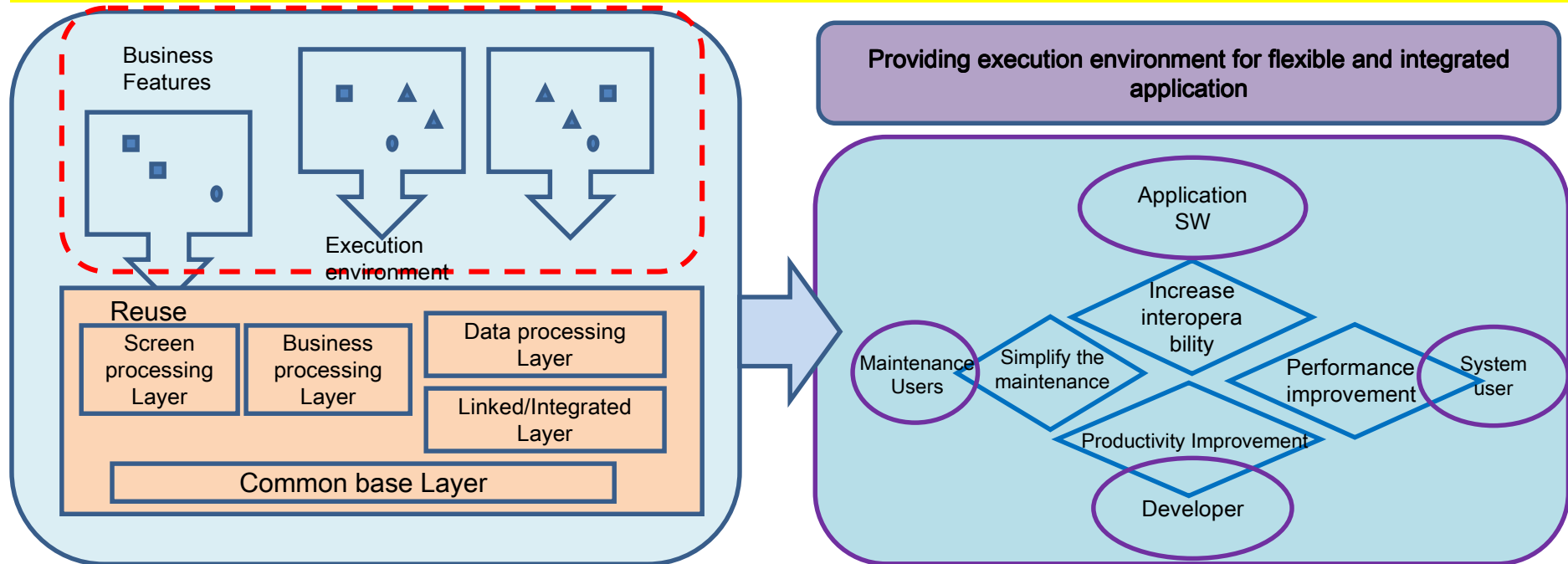
2.1. Standard Framework Development - (5) Open Source

Selection best Open Source through analysis and verification for building open Standard Framework which utilize Open Source



2.1. Standard Framework Development - (6) Perform results of the execution environment

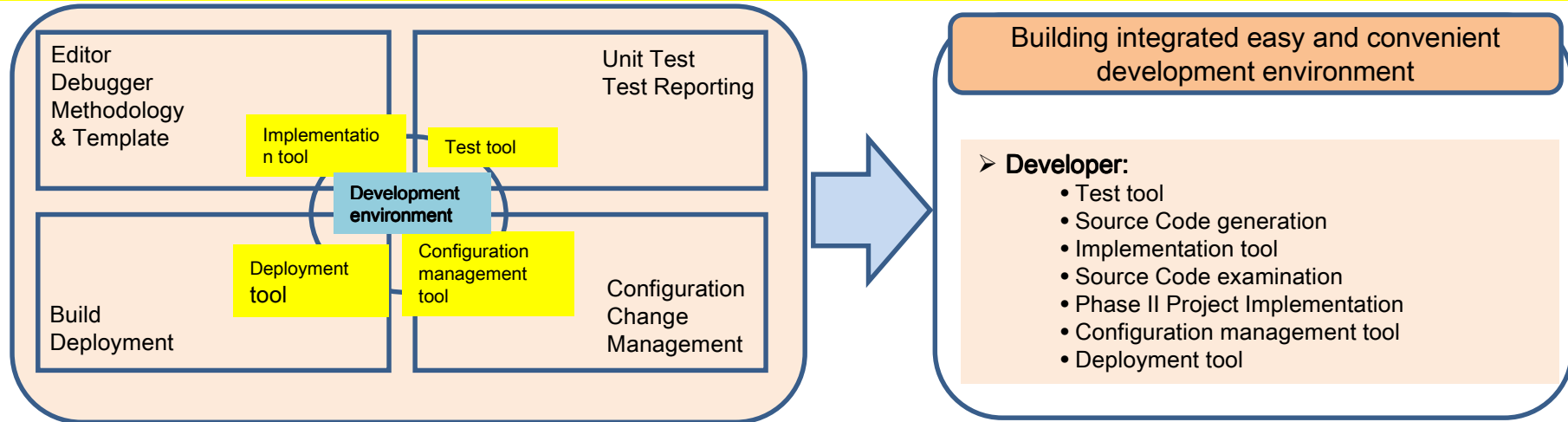
Implementation Standard Framework execution environment of 5 types of Layers as Screen processing, business processing, data processing, connection processing, common base etc.



Implementation Features		Implementation description	Remarks
Screen processing Layer	Ajax Support etc.	Providing architecture required for implementation UI component interface and screen (UI Adaptor etc.)	Open-source utilization and supplementation
Business processing Layer	Spring Web Flow etc.	Providing function etc. which shows mapping from business flow to screen flow (Web Flow function etc.)	
Data processing Layer	iBatis etc.	Providing DB related various connection and S L processing functions (DB connection, S L processing etc.)	
Linked/Integrated Layer	C F etc.	Providing Web Service, Connection metadata etc. functions (Web Service etc.)	
Common base Layer	Spring, log4j etc.	Providing utility required for development and variety reusable components of Server function (Bean management, common use function etc.)	

2.1. Standard Framework Development - (7) Perform results of the development environment

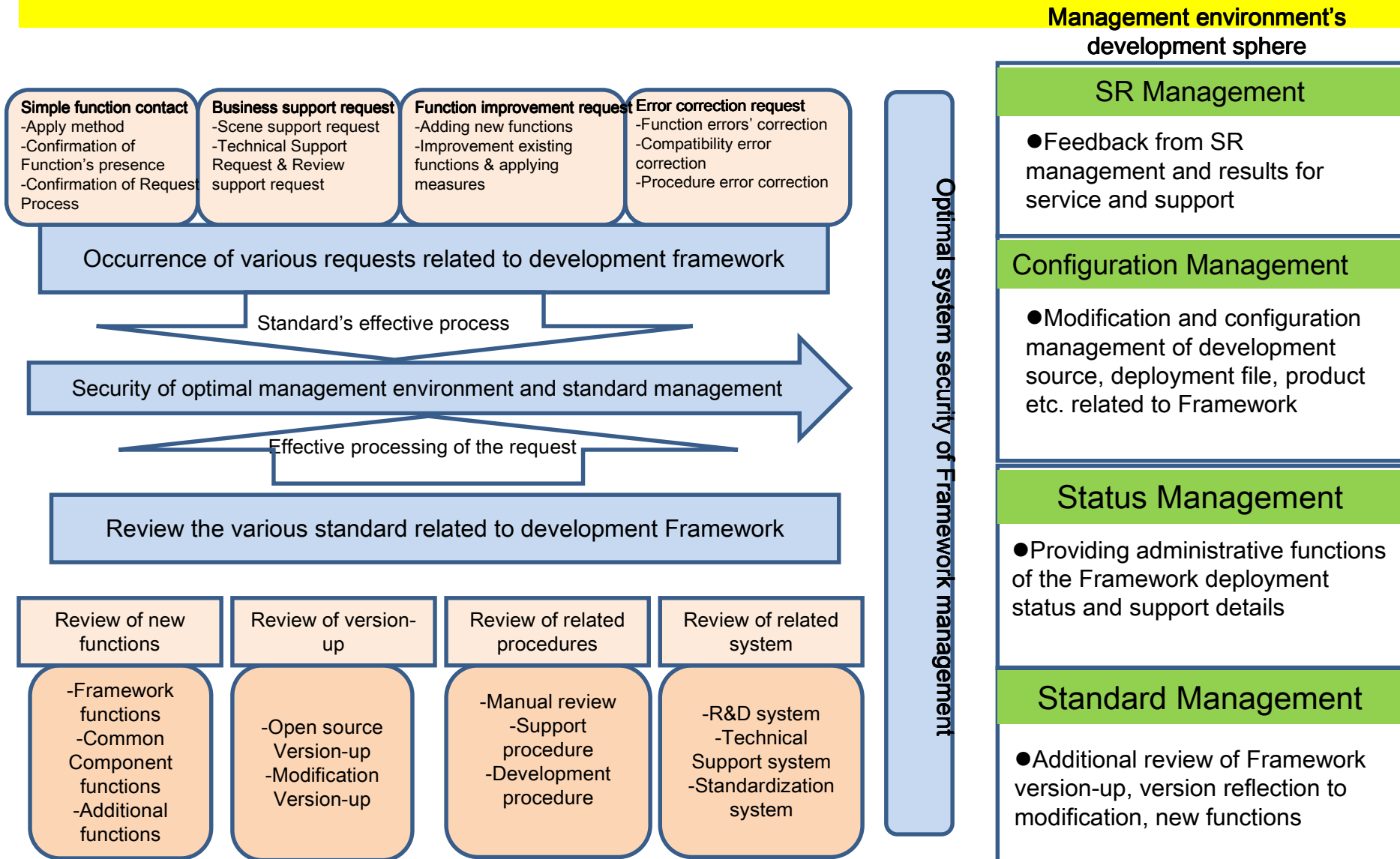
Implementation easy and convenient Framework development environment as implementation tool, test tool, configuration management tool, deployment tool etc.



Implementation Features		Implementation Description	Remarks
Implementation tool	UML Editor/ERD Editor	UML, ERD Notation creating tool	Open Source utilization
	Integrated PlugIn	Screen which can instinctively use tool required for development execution environment base	New development
	DBIO Editor	Tool creating S L/revising and determine S L results through Test perform	
Test tool	Test Case	Tool which can create executable Test Code	Open-source utilization and supplementation
	Test Coverage	Tool analyzing Test perform Coverage and reporting	
	Test Reporting	Tool reporting Test results with varies format	
Deployment tool	Developer build tool	Tool which can manage library dependency and build in developer's PC	New development Open Source utilization
	Deployment management	Tool which can set transfer destination and cycle	
Configuration management	Configuration management	Configuration management tool which supports configuration elements identification and registration, history	Open-source utilization and supplementation
	Change Management	Issue tracking systems that can manage the issue	

2.1. Standard Framework Development - (8) Perform results of the management environment

Management environment development for internal processing and effective reception of Standard Framework various inquiry and request



2.1. Standard Framework Development - (9) Comparison of existing SI Framework

E-Government's Standard Framework base on experience of development operation of existing SI Framework was reflected by specific characters of e-Government and public business with guarantee of nationwide interoperability.

Comparison of Big 3 SI Company's Framework

Division	SI Big 3 company's Framework	Standard Framework of e- Government
Providing functions	Realization/development environment oriented (about 40 elements)	Realization/development/management/operational environment (54 types of elements)
Quality		Select best function with verified quality through Big 3 Company's operations
Scalability	Internal Interface	Standard Interface
Common Components	Disapproval for private use, reuse uncomfortable without standard specifications (about 100-150 species)	Simple or low scale reuse by providing with standard specifications (219 species)

2.2. Common Component development -(1)Common Component's Concept

Common Component means administrative information resources, which can commonly use in many administrative organizations and in this project targeted on Application SW

Specific operations	National Defense Science & Technology Education Social Security Environment ...					
Common operations	Public relations Foreign Cooperation Document Management Business Management Knowledge Management ...		Common Business area			Specific Business Area
Common technique	User Management Blindness authentication Survey Administration Bulletins ...	Common Technology				
Utility	Format / calculation / conversion process Cookies / session processing...	Utility				
		Class, Engineering Component	Single Component, distributed object	Multiple Component, Business Component	Application, business component system	Service oriented
			SRM Area	SRM Area	SRM Area	

2.2. Development of common components-(2)Deduction process of common components

Establishment of deduction principles of common components through preceding ISP business, deduction of common components according to deduction procedure and classification

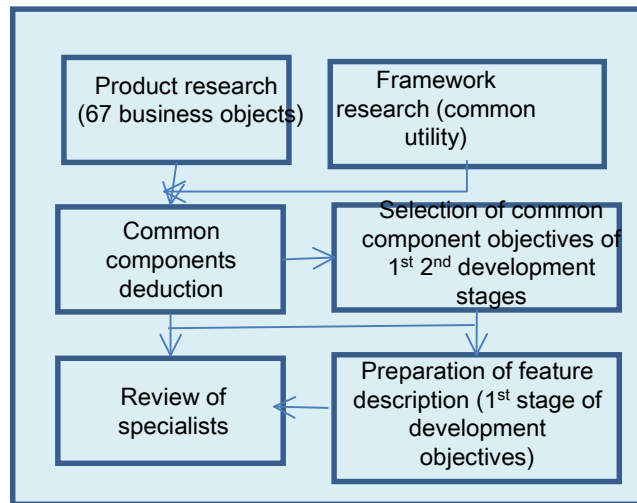
1. Deduction principles of common components

Feature with high frequency of duplication development

Feature with high probability of reuse

Feature with high application of standardization

2. Deduction procedure of common components

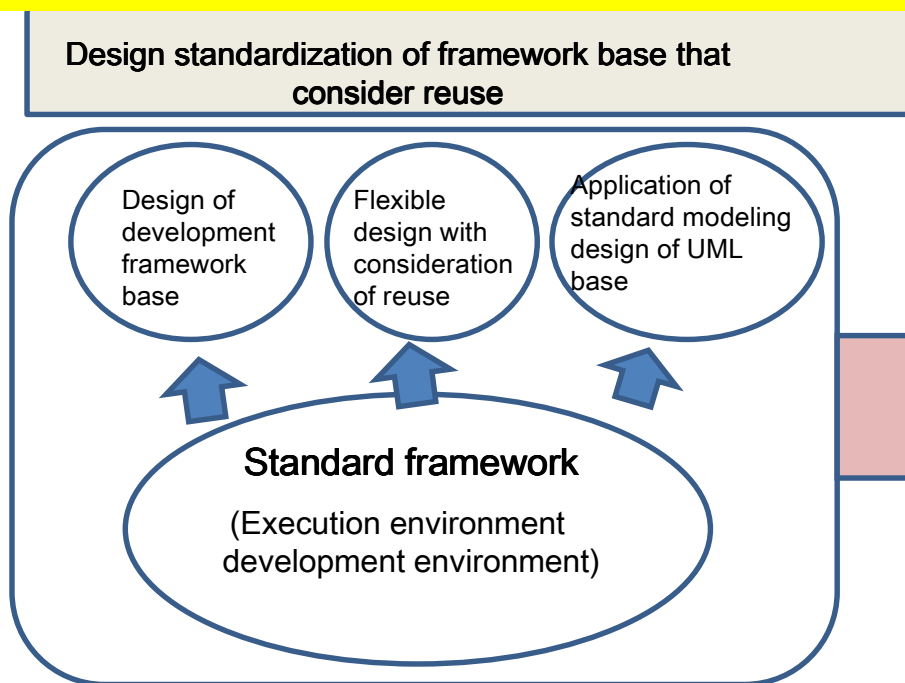


3. Deduction of common components and development objectives

Classification	Description	Results
Outputs Investigation	<ul style="list-style-type: none"> • Research features list of e-Government (Research of 67 businesses that supported e-Government in 2004-07) • Application of 5 stage feature • Deduction of common components 	<ul style="list-style-type: none"> - Number of function investigation : 31114 - Number of cases: 9,018 - Common technology: 83 - Common business: 35 - Common technology: 142
Framework Investigation	<ul style="list-style-type: none"> - Deduction of common utility components 	Common Technology : 83

2.2. Development of common components: (3)execution results

Determining 172 types of common components and realization of framework base common components with easy reuse



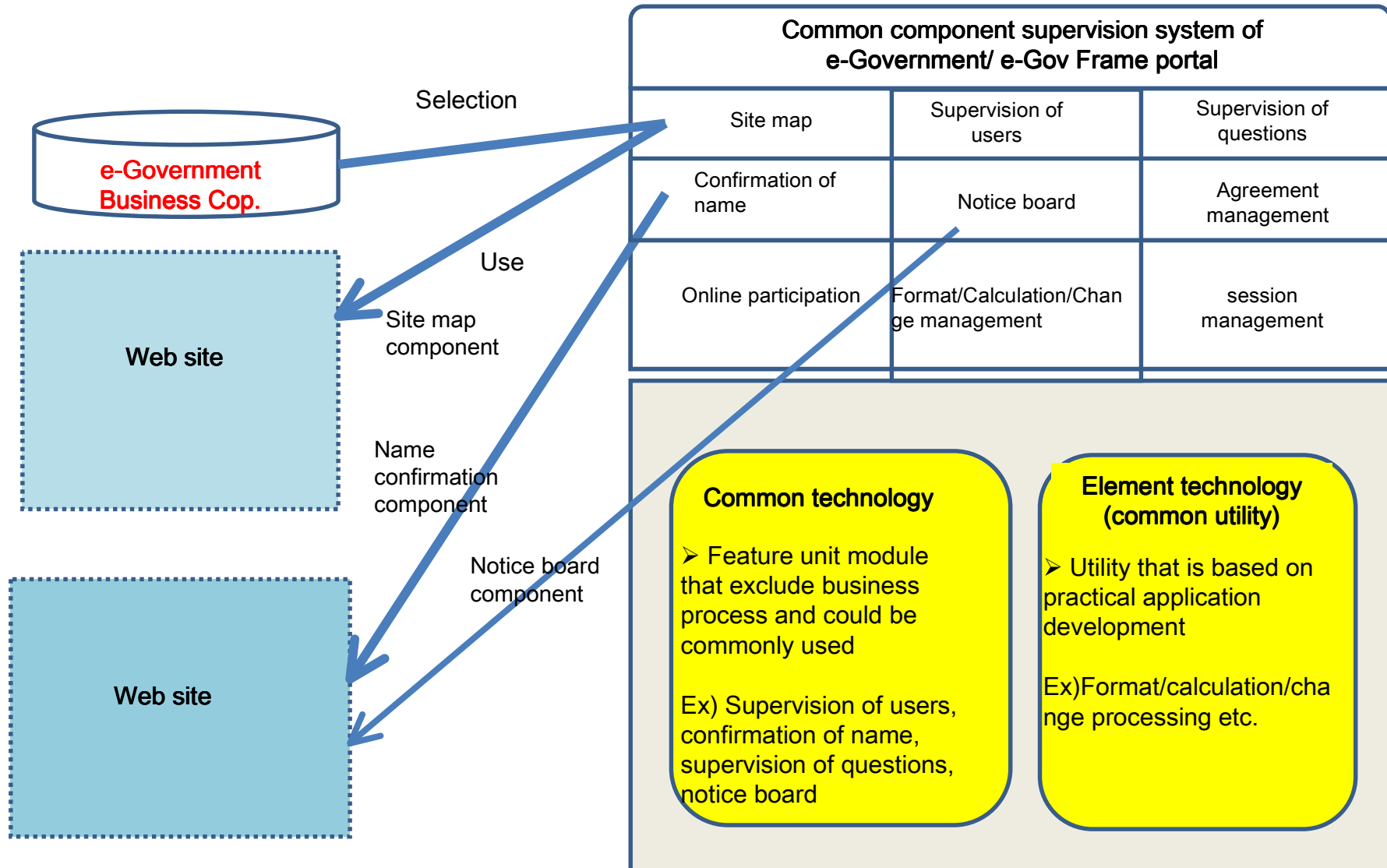
Practicing of Consultation conference for changes in common component development item

Development principles of common components	<ul style="list-style-type: none"> -Consultation with supervising and responsible authorities and consideration of exception in sphere in case of contradiction between common component and common used S/W -Development of interface in case of unavoidable usage of commonly used product
Consultation conference – 2nd	<ul style="list-style-type: none"> -Convergence of views about development plan of commonly used S/W and contradicted item -Commonly used S/W and contradicted item exclude development and develop non-contradicted substitutive item
Online consultation conference	<ul style="list-style-type: none"> -Online convergence of views about substitutive development item -Statistical management of 12 types of common components regarding messenger, graph, electronic mail, substitute 29 types of management of log and confirmation 142 types

Section		Development item
	Security	Confirmation of users name, authority management 8 types
Common technology service (95 types)	Users directory/ common confirmation	General login, confirmation login 3 types
	Users support	Supervising users, consultation, managing questions, FA , &A 36 types
	Cooperation	Notice board, supervising association of likeminded users, managing community 22 types
	System management	Common code, managing menu, managing log 17 types
	System/service connection	Managing status of connection, managing connection authority 4 types
	Statistics/ reporting	Statistics of notices, statistics of connection
Key technology service (utility) (77types)		Calendar, format/calculation/changes etc (77 types)

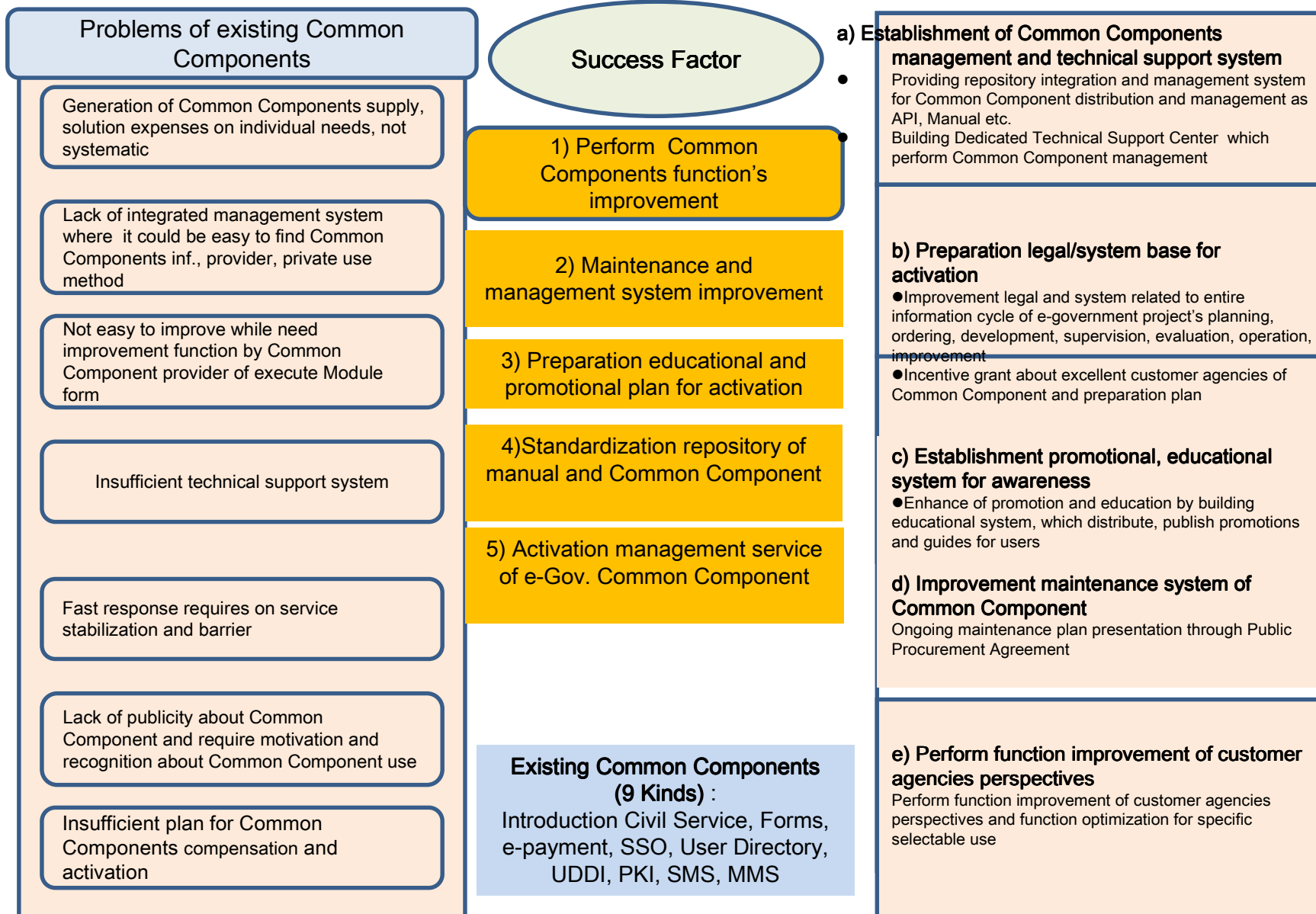
2.2. Development of common component: (4)wide distribution plan

Wide distribution through common component supervision system and e-Gov frame portal for easy reuse in e-Government business by supplying in type of SOS code that includes guide of 172 types of common components

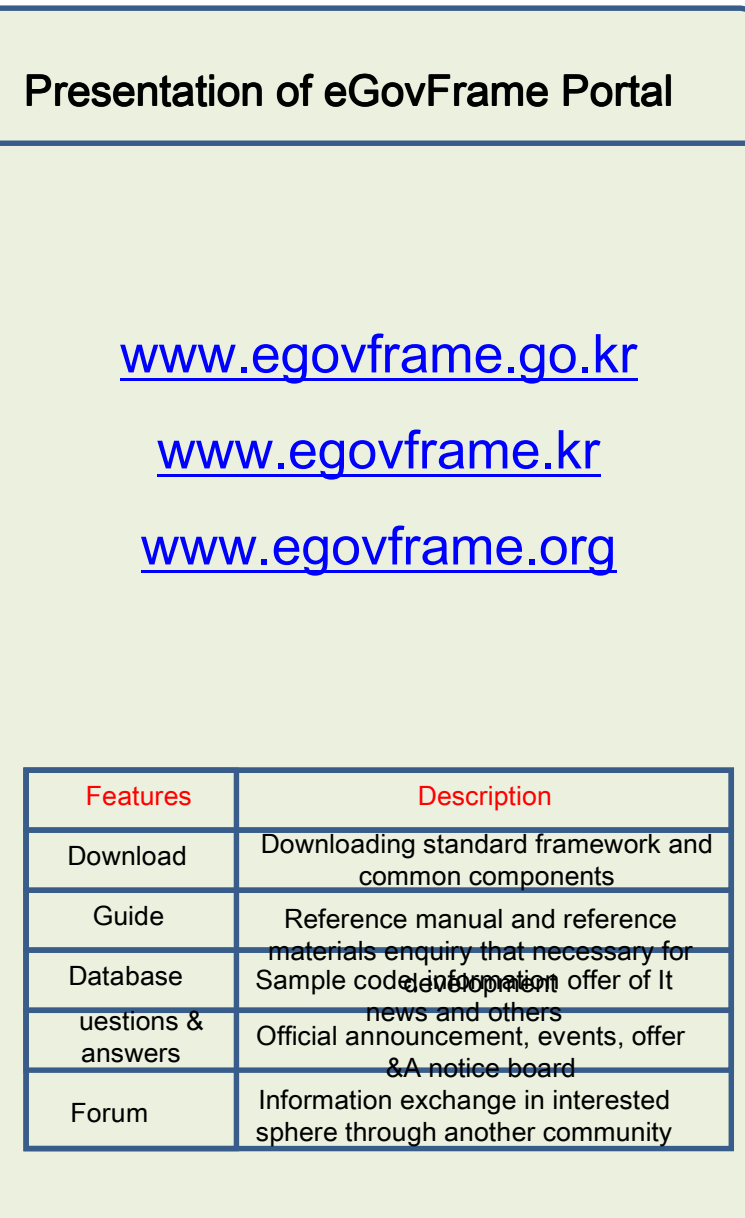
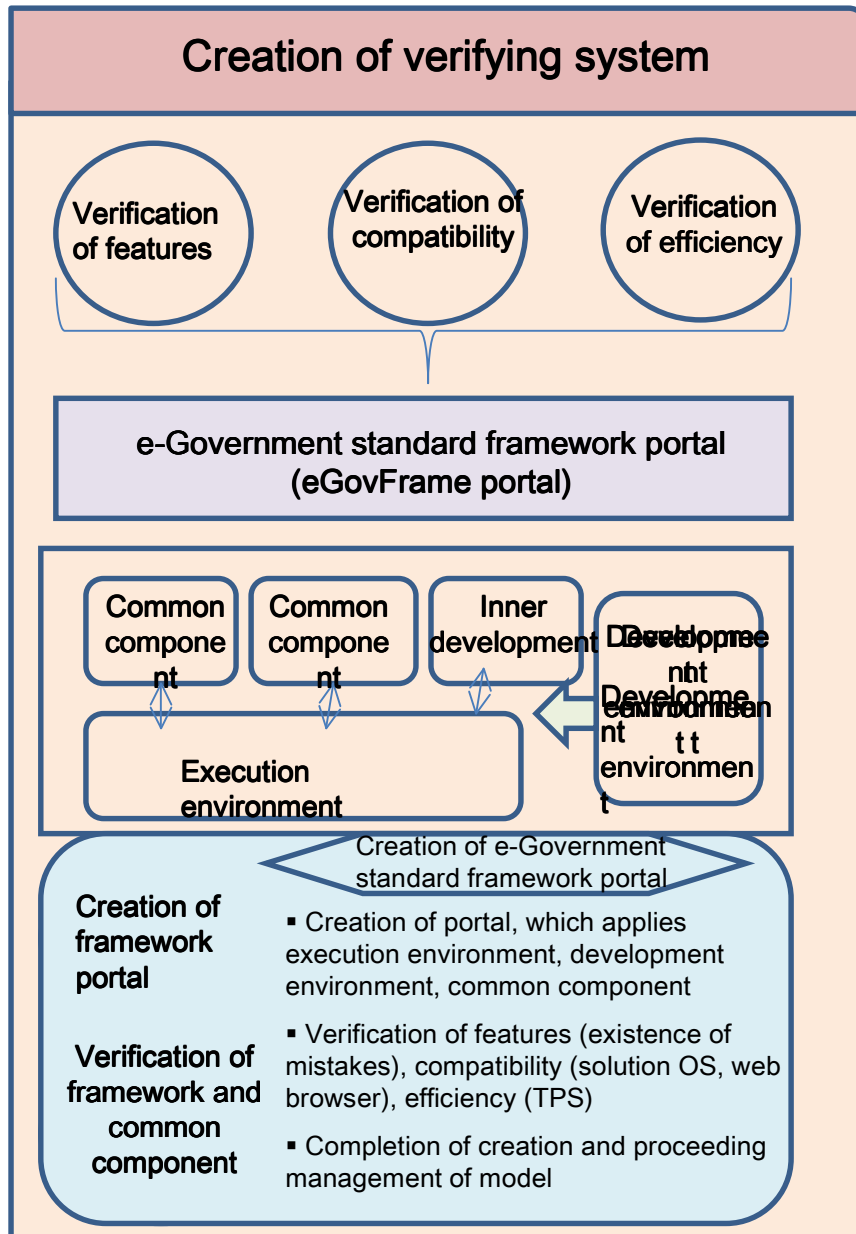


2.2. Development of common component: (5) Common Component activation plan

Establishment Common Component activation plan by analyzing problems of existing Common Components

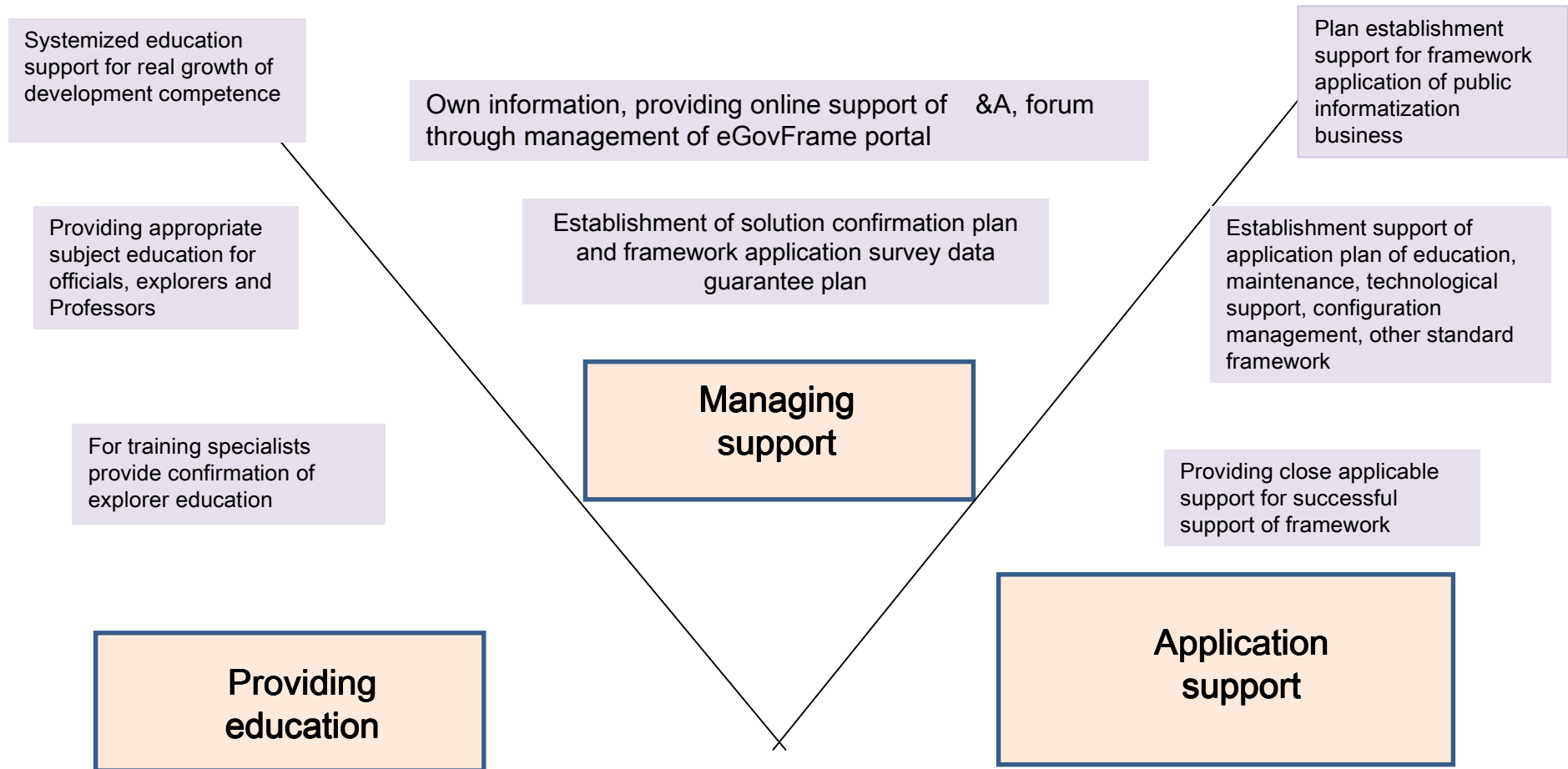


2.3. Creation of eGovFrame portal



2.4. Supporting activation : (1/4)- summary

Providing education and application support for introduction/activation of e-Government standard framework



2.4. Activation support (2/4) - education

To the activation of standard frame work government office, small business, opening educational courses for specialists lecturers. (Currently 118 institution, 228 lecturers' finished)

Necessity

1. Solving doubt about ordering officer and SI businessmen's burden
2. New development technology acquirement
3. Recurite of expert human resource though encyclopedic education

Education course

1. Education for government officer
2. Education for Project participating company
3. Free education for small and Medium size IT Company
4. Education for education institute instructor

The activation of standard frame work (2009)

Education course	Hour	une	7	8	9	10	11
Basic education for government officer (100 person)	1 day (4 hrs)	Educating at government Information education center					
Frontier education for Small IT business company (200 person)	4 day (32 hrs)	22 25	20 23	10 13 17 20	7 10 21 24	12 15 26 29	9 12 16 19
Project participating company education (150 person)	4 day (32 hours)	Educating each company level					
Instructor training course (20 person)	4 day (32 hours)		13 16				

2.4. Activation support (3/4) management support

To the activation of standard frame work through portal of e-Government business manager, for the developer an offer information etc. online training support and point guide framing, activation of device system establishment etc. other training management support.

eGovFrame portal management and online support



Division	Support content
An offer information	Education material, education material, sample, relation material (report etc.) Practice environment – developing environment – commonness component guide
Online support	FAQ, Question and Answer (Q&A), User forum
Communication	Common knowledge, event guidance, question survey
Download	Practice environment – developing environment – commonness component guide up-to-dateness download

Other management support

Point guider framing	For the business manager and business charger practice use object introduction
Productivity measurement of data security	For reflecting division, standard framework application of other productivity developing evolution necessary data deduction and security
Constitution of full responsibility organization management support	Constitution of full responsibility organization and founding management program and new necessary matters support management
Certificate program solution	Into and outside of state solution (frame work related) systematic period and for secure mutually managing found certificate system
Activation of planning system	For applicant activation reduction output, compensation e t. c. systematic planning founding support

productivity survey will be implemented by industrial education cooperation

4. Activation support (4/4) applicant support

Depending importance of applicant business object main, through shape of important support, practice selection support and superiority case of secure activation

Applicant object selection

Priority of selecting	Summation	Explanation priority of selecting
Scale	10%	if it doesn't have condition on scale, big scale will be priority
Extension	30%	State standard business or whole time yearly business is priority
Business type	30%	In case a new project system is priority
Best Practice	20%	Commonness component security, new technology practical use
Capability	10%	Practical use capability architecture and frame work

Application support activity

Project program	Project start	Project training
Basic education (1 day)	Start support Program founding (necessarily)	Constriction environment establish (5day's)
Project program Establishing support (demand)	Developer education (4day's)	Templates customizing (10 day's)
		Issuing and developing guide (20day's)

Focused Assist (5)	Advancing of civil appeal service, Commonness use of administrate information system, The portal system of state representing, The unity system of certification, U-IT basic, Beef import course of pursuit circulation system
Basic Assist (5)	Support system of competitive power of enterprises, Chonbuk development construction MIS, , Incheon Port distribution, Small and medium sized enterprise operation support policy information, Kwangju District Administration

Training of all support activity (Period of training 40 day/rough 2mm)

Basic education and developer education training and developer guide (Period of training 2 day/rough0.1mm)

each business application support object and possibility change activity accordance of corporate managing company

accordance of applicant total 10.5mm need resources (each business 1-th standard)

2.4. Activation support (4/4) applicant support

Focused support Project

Project name	Ordering Office	Executer	Excution Term
The portal system of state representing	Ministry of public administration and security	UNIDUCS	2009.12.15
The system of unity certification	Ministry public administrative and security	LG Nsys	2009.12.21
Commonness use of administration information.	Ministry public administrative and security	Samsung SDS	2009.12.31
Import of beef meal course of pursuit circulation	Ministry for food, agriculture, forestry and fisheries	Samsung SDS	2010.2
Advancing Civil Service	Ministry public administrative and security	LG CNS	2009.12.31

Basic support project

Project name	Ordering Office	Executer	Excution Term
Support system of competitive power of enterprises	Smaller Business administrative	Samsung SDS, LG CNS	~ 2009.12.31
I-PLUS Incheon Port Authority unification 1-th operation	IPA, Incheon Port Authority	New world I&C	-
The unity control system of policy information Enterprise support	Smaller business contest support center	Withus 21	-
The unity control system of Kwangju Deputy District	Kwangju Deputy District	Hanmoi information	-
The unity control system of front development public affairs	front development public affairs	SQT	-
State spatial information	Ministry of Land, Transport and Maritime Affairs	Samsung SDS	~ 2009.12.31
Administrative spatial information	Ministry of public administrative and security	Samsung SDS	~ 2009.12.31
Women net	Ministry of Gender Equality	E-value biz	~ 2009.12
Small and medium sized enterprise SW service SaaS platform development	Industry and Technology development with Ministry of Finance and Economy	ETRI	2009 – 2012

Frame work support activity: Continue of previous slide

Operation name	Ordering	Executer	Training Time
Home shopping site	Lott – e	Lott –e information system	
Home shopping site	-	e Commerce	
Electronic bidding system solution support	Oneself solution	Abydos	2009. 6 ~ 2009.12.20
Unity cost price calculation system	Public procurement system	IDEA information technology	2009.1 ~ 2010.6
Harbor management system	Ministry of Land, Transport and Maritime Affairs	KL net	2009.7
World education course DB	Korean institute for curriculum and evaluation	Fuzewire	2009.7 ~ 2009.11
Unity support system	Ministry of Justice	System gate	~
Unity health care system	Korean University of Technology and Education	autoeversystems	2009.6
Unity information system	National IT industry promotion agency.	zungwon NC System	2009
Inhabitants registration system package work	The Korean Software agency	CNIS	-
public corporation of business security	The Korea Occupational Safety and Health Agency	inovtech	2009. End of year
Data set and nonstandard document operation system of model operation	National Archives of Korea	Nave system	2009.7 ~ 2009.12
-	Hyundai Avto	NCH soft	2009.9 ~ 2010.2
LMIS	Korean EximBank	3 Sp	2010.6
System of communication of District information	Ministry of public administration and security	-	-

2.5. Application plan by stage

Application for 5 of projects in 2009 for early validation and finding best cases and in 2010 enlargement and application in new, advancement projects.

- Since 2010 gradually enlargement and application in new/advancement projects among whole public information projects.

Division	2009	2010	2011	2012
Public Information project's rates	5 projects	More than 10%	More than 25%	More than 50%

Configuration management system for successful settlement and evolution/development of Standard Framework

Configuration Standardization Committee of e-Government Framework

- Standardization Committee of e-Government Standard Framework, which was constructed by Industry Academic expert and operation the configuration
- Deliberation the requirements of Framework improvement received from Industry etc.

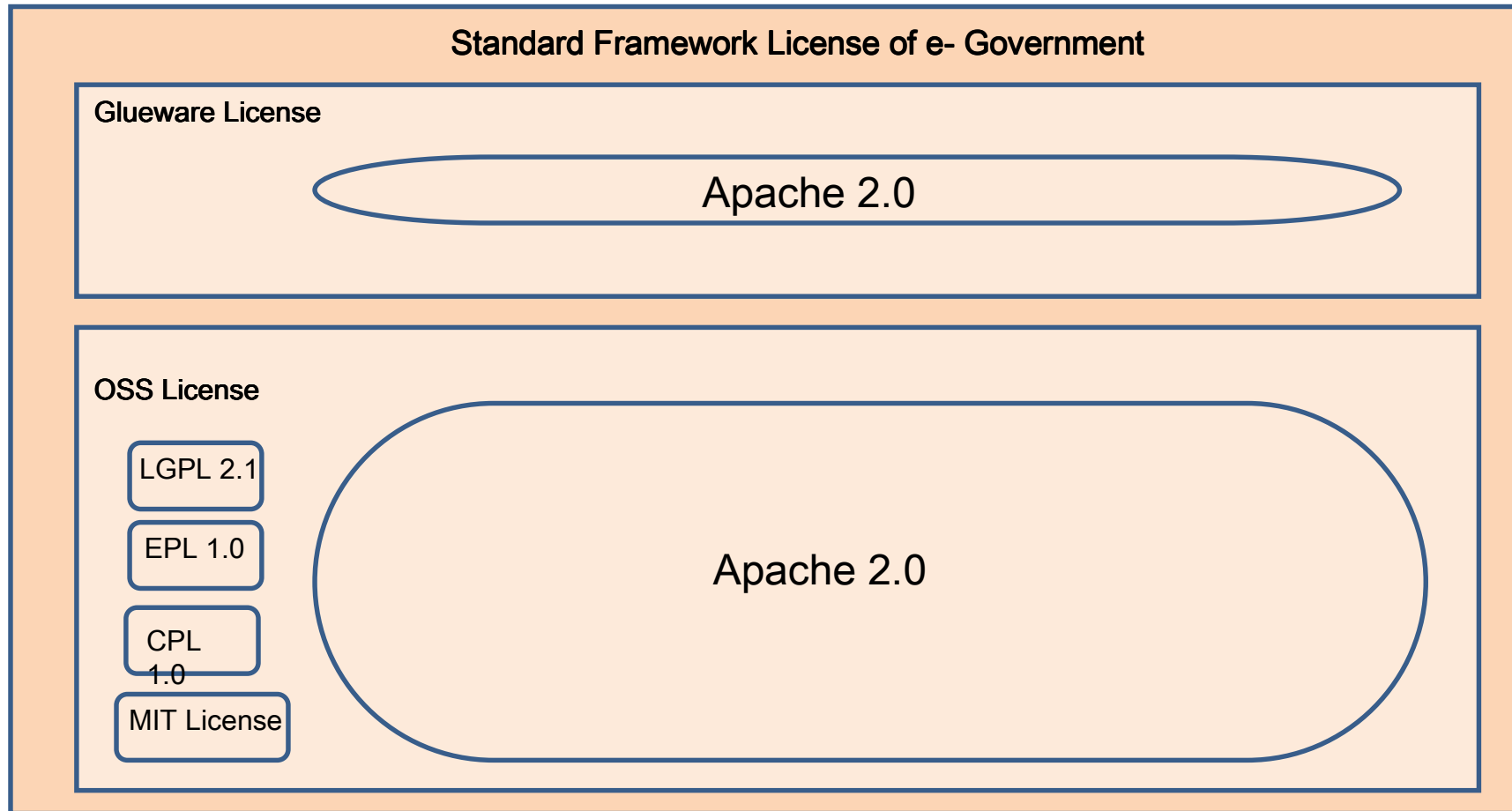
Creation in NIA R&D system

- Creation R&D organization in the NIA
- Review functional improvement's requisition as early Framework standard-led

Attach Standard Framework License

Standard Framework License keep the original license of Open Source SW and select each component's best license with applying for net development Glueware's Apache 2.0 license

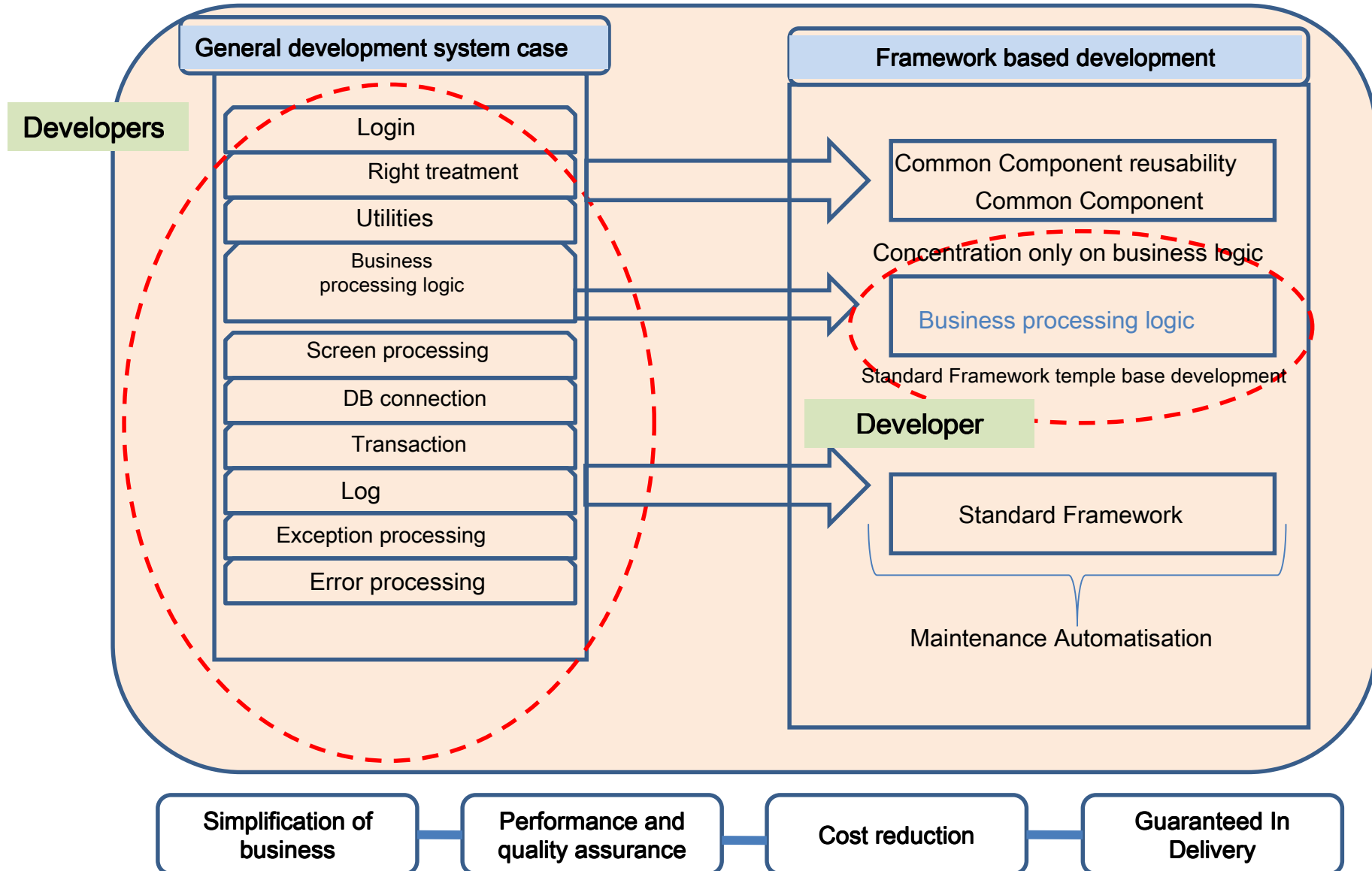
License configuration of e-Government Standard Framework



Glueware is Source Code developed for conducting Framework functions by connecting with each other OSS and means Net development Source Code without using OSS

2.6. Expected results

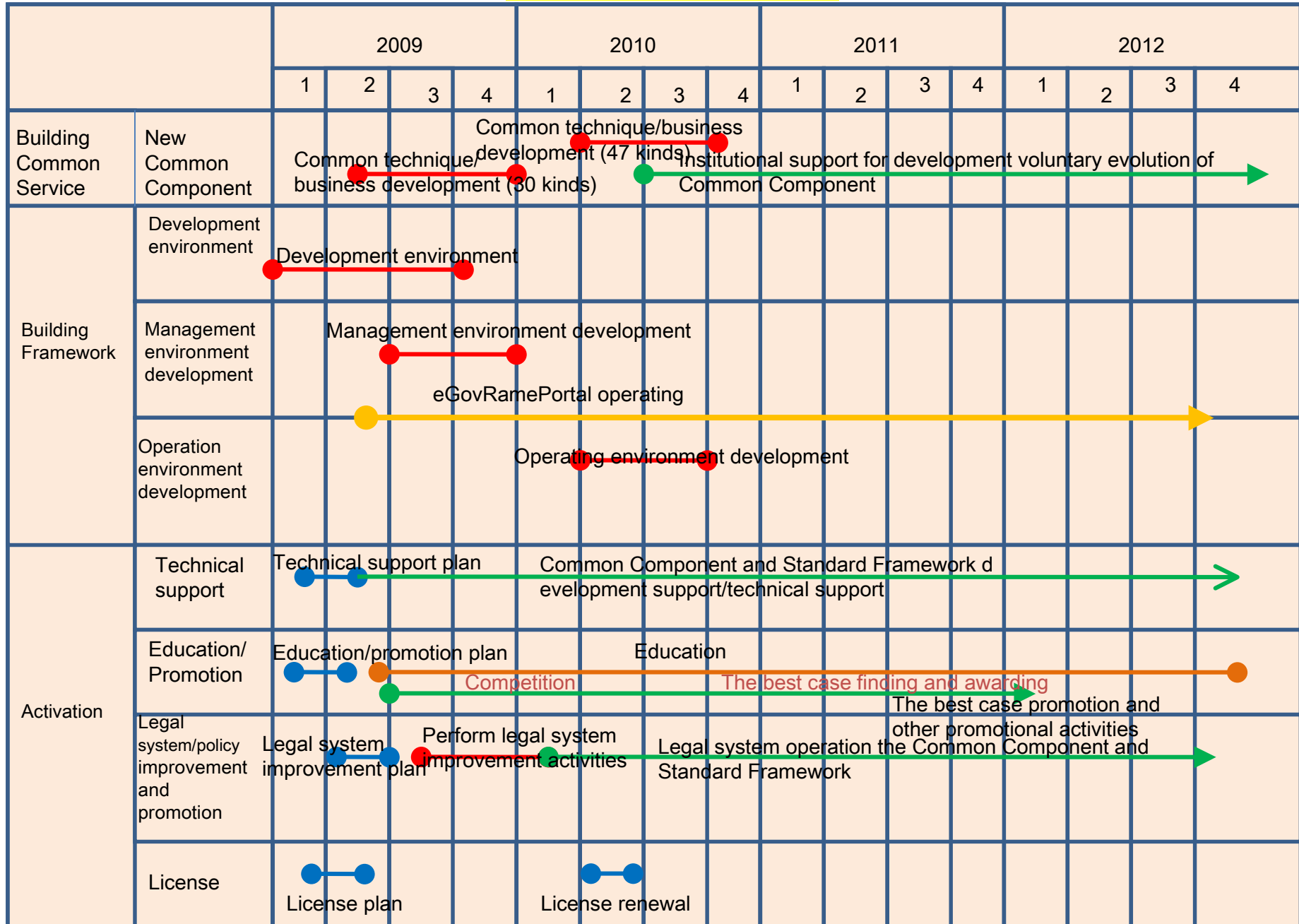
Through Standard Framework template program developer concentrates only on logic development of business and improves productivity. Also quality assurance and minimization risk through development standardization of temple base.



3. Future plans

- Future schedules

Future schedules



Detailed schedules can be changed in consultation with organized institutions

Thank you very much

Dr. Chang-hak Choi

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•PCGID: Presidential Committee on Government Innovation & Decentralization
(e-Government Special Committee)