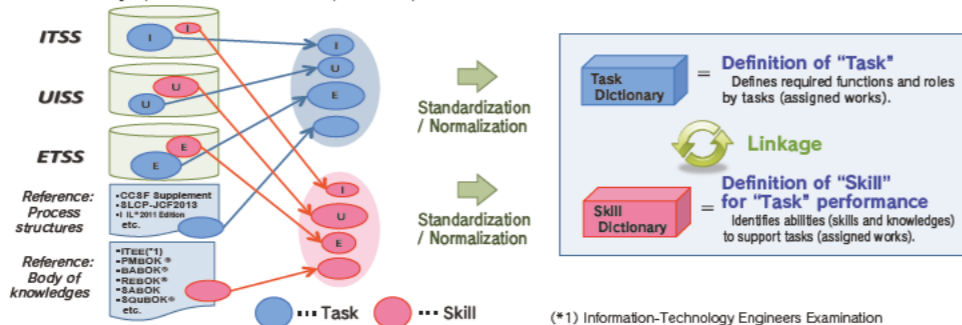


# 1 i Competency Dictionary

The i Competency Dictionary (iCD) was released as a structured dictionary composed of the "Task Dictionary" and the "Skill Dictionary". The "Task Dictionary" contains the tasks for any business using information technology in any companies, while the "Skill Dictionary" provides the skills required to perform those tasks.



# 2-3 Task Profiles

"Task Profiles" helps an organization to understand tasks when selecting tasks from the Task Dictionary to define own tasks. The profiles are classified based on task features and characteristics by their corresponding business/function or development target, as described below.

- Business type-based: Identifies tasks by the organizational position or business category
- Development target/method-based: Identifies tasks by the type of development target/method
- New business-based: Identifies tasks by the type of new businesses
- Role-based: Identifies business roles and associated tasks as a reference

Business type-based	Development target-based	Development method-based	New business-based
Internal information system development rationalization	Application systems	IT consulting	Cloud business creation
System integration development	Infrastructure systems	Web site construction and operation	Cloud business architect
Software product development	Software product	System operation services (contract operations work)	Cloud architect
Embedded software development	Embedded software	System operations services (data center management)	Business analyst
Website construction	Websites	IT consulting	Data analysis specialist
Website construction and operation	Waterfall	Application systems	Data utilization
System operation services (contract operations work)	Agile	Infrastructure systems	Consultant (information management)
System operations services (data center management)	Package utilization	Software product	IT architect (security architecture)
IT consulting	Cloud business creation	Embedded software	Security administrator (information security administrator)
Application systems	Cloud business architect	Websites	Security administrator (IS security administrator)
Infrastructure systems	Cloud architect	Waterfall	Security administrator (incident handler)
Software product	Business analyst	Agile	Security manager (embedded security)
Embedded software	Data analysis specialist	Package utilization	IT specialist (security)
Websites	Data utilization	Cloud business creation	Information security management
Waterfall	Consultant (information management)	Cloud business architect	Program manager
Agile	IT architect (security architecture)	Cloud architect	Value create
Package utilization	Security administrator (information security administrator)	Business analyst	Business model design
Cloud business creation	Security administrator (IS security administrator)	Data analysis specialist	Service create
Cloud business architect	Security administrator (incident handler)	Data utilization	
Cloud architect	Security manager (embedded security)	Consultant (information management)	
Business analyst	IT specialist (security)	IT architect	
Data analysis specialist	Information security management	Security administrator (information security administrator)	
Data utilization	Program manager	Security administrator (IS security administrator)	
Consultant (information management)	Value create	Security administrator (incident handler)	
IT architect (security architecture)	Business model design	Security manager (embedded security)	
Security administrator (information security administrator)	Service create	IT specialist (security)	
Security administrator (IS security administrator)		Information security management	
Security administrator (incident handler)		Program manager	
Security manager (embedded security)		Value create	
IT specialist (security)		Business model design	
Information security management		Service create	
Program manager			
Value create			
Business model design			
Service create			

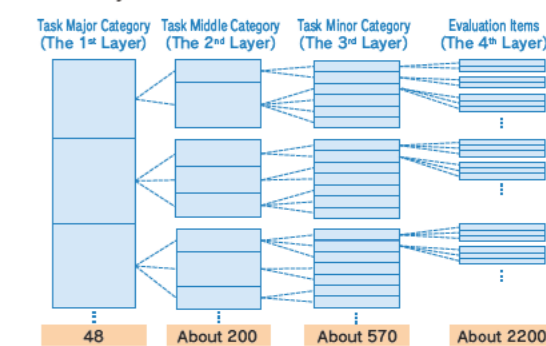
# 2-1 Task Dictionary Chart

The Task Dictionary Chart represents the task structure composed of the business lifecycle as vertical line (strategy, planning, development, utilization, evaluation/improvement) and tasks associated with entire lifecycle as horizontal line (Management/Control, and Promotion/Support). This chart is a bird's-eye view of the entire Task Dictionary on the Major Category level and can be used in the formulation of their own tasks.

Lifecycle	Planning & Execution			Management & Control			Promotion & Support																			
	Strategy	Planning	Development	Utilization	Service Management	Evaluation & Improvement	Line Management	Business Continuity Management	Information Security Management	Quality Management	Contract Management	Compliance	Human Resource Management	Internal Control Status Monitoring	System Audit	Marketing and Sales	Reuse	Procurement and Outsourcing	Standards Formulation, Maintenance, and Management	Investigation, analysis, and technical support of new business and technologies	Data Science	New product and Service Development by the New Value Creation				
Lifecycle	ST01	PL01	DV01	US01	EV01	MC01	MC02	MC03	MC04	MC05	MC06	MC07	MC08	MC09	CM01	CM02	CM03	CM04	CM05	CM06	CM07					
	ST02	PL02	DV02	US02	EV02																					
	ST03		DV03	US03	EV03																					
			DV04	US04	EV04																					
			DV05																							
			DV06																							
			DV07																							
			DV08																							
			DV09																							
			DV10																							
			DV11																							
			DV12																							
			DV13																							
			DV14																							
			US01	EV01																						
			US02	EV02																						
			US03	EV03																						
			US04	EV04																						
			US05	EV05																						
				EV06																						

# 2-2 Task Dictionary structure

The Task Dictionary is comprised of four layers that are divided into three task layers plus the Task Evaluation Items layer.



- Features**
- Provides wide-scale, comprehensive tasks with regard to IT business referring major process structures (right "References").
  - Task evaluation items (approx. 2,200 items) are provided to evaluate task performance.
- References**
- CCSF(V1-Supplement)
  - SLCP-JCF 2013
  - ESPR Ver.2.0
  - ITIL® 2011 Edition etc.

# 2-4 Examples of Task Evaluation Diagnostic Level and Criteria

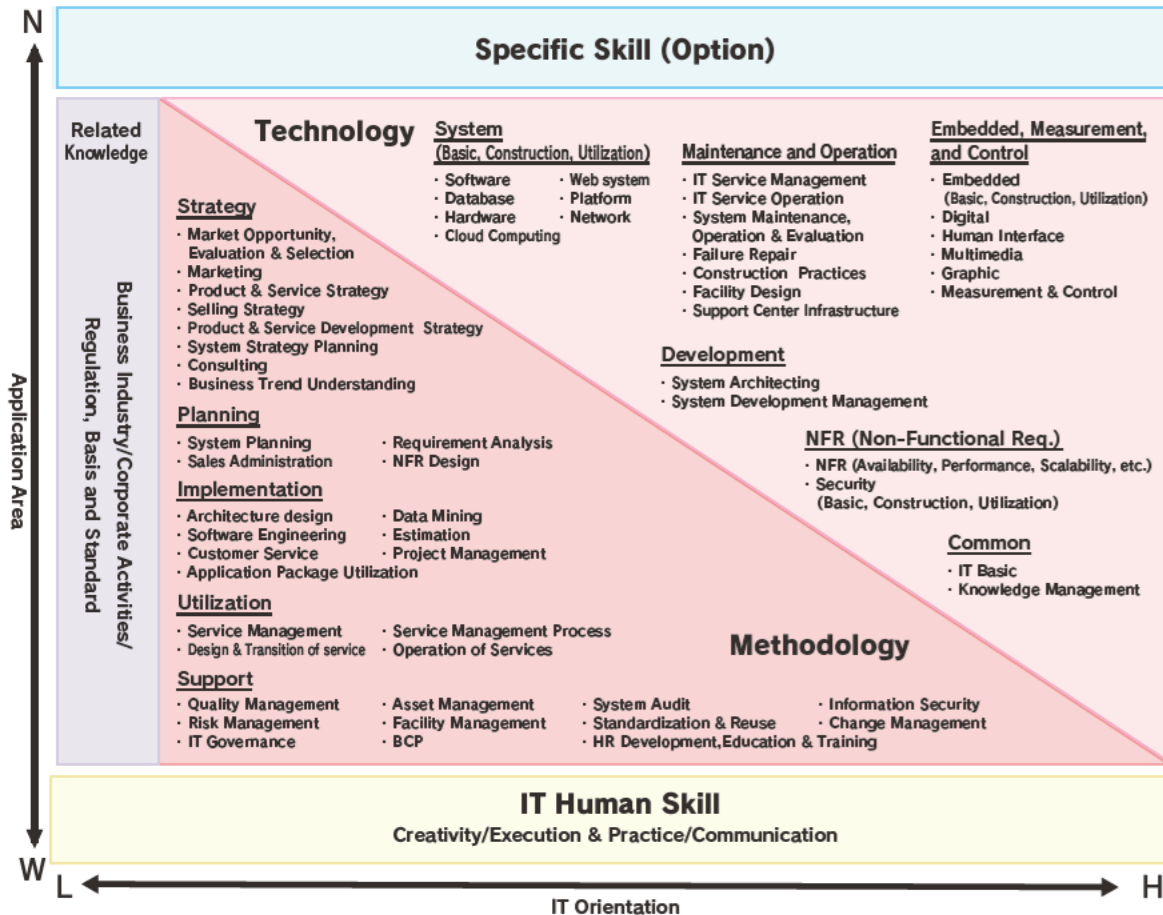
Diagnostic Level	Diagnostic Criteria
L0	No knowledge or experience
L1	Has knowledge based on training
L2	Can carry out with support or has such experience
L3	Can carry out independently or has such experience
L4	Can instruct others or has such experience

iCD IPA English Search

This handbook is intended to understand an overview of the iCD. Please refer to the web site for more details.

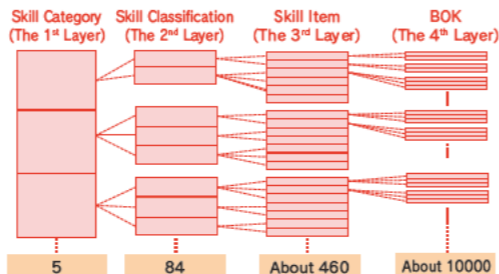
# 3-1 Skill Dictionary Chart

The Skill Dictionary Chart is a bird's-eye view of the entire Skill Dictionary on the 1<sup>st</sup> and 2<sup>nd</sup> skill layers. The Skill Dictionary is divided into five categories based on the skill characteristics: methodology, technology, related knowledge, IT human skill, and specific skill (optional). This chart represents a skill structure on the perspectives of the IT orientation (Horizontal line: High-Low) and the application area (Vertical line: Wide-Narrow).



# 3-2 Skill Dictionary Structure

Skills are capabilities required to handle associated knowledge items to execute a task. The Skill Dictionary is comprised of four layers divided into three skill layers plus Associated Knowledge Items (approx. 10,000 knowledge items). The Skill Dictionary refers major Body of Knowledges and skill standards in the world.



- Features**
- Structuralizes the comprehensive skills and knowledges required for IT business based on the knowledge items of the major references.
  - The skill category consist of 5 categories : methodology, technology, related knowledge, IT human skill, and specific skill (user definition area).
- Reference**
- ITEE (Information-Technology Engineers Examination)
  - J07
  - PMBOK
  - BABOK etc.

# 3-4 Skills Proficiency Criteria

Level	Description	Criteria 1	Criteria 2	Criteria 3
Level 7	Skills at the level of an industry leader who has influence on the market			
Level 6	Skills at the level of a recognized contributor to the industry			
Level 5	Skills at the level of a recognized contributor within affiliated associations and organizations			
Level 4	Level at which one is able to produce optimal solutions that take into account non-functional requirements, step outside of established tactics, and pass the advanced information technology examinations	Has mastered and can select the most suitable methods, and can freely apply the methods according to the situation	Is able to discuss what needs to be done with senior management within the industry or business they are involved in	
Level 3	Is able to create functional requirements and to work independently under limited circumstances	Is able to apply the proper method according to the problem, and has utilized the methods on-site and drawn conclusions	Has proposed solutions to the IT-related problem points in the industry and businesses they are involved in	
Level 2	Has implementation experience, and is able to use and apply the technology if instructions are available	Is able to perform analysis using the method, or is able to use the methodology under guidance	Understands the IT-related problem points in the industry and businesses they are involved in	
Level 1	Has knowledge, and understands lectures and presentations of the technical content	Understands lectures and presentations about the method, understands and can explain what it is, and understands textbooks about it	Understands and can explain what kind of industry and business they are involved in, and understands public information such as annual reports	
Category		Technology	Methodology	Related Knowledge

# 3-3 Job list

The Job list includes the professions needed for IT business from various perspectives and shows mandatory skill items of the Skill Dictionary for the profession.

Origin	Job category	Specialized field	
ITS	Marketing		
	Sales		
	Consultant		
	IT architect		
	Project management		
	IT specialist	Platforms	
		Networks	
		Databases	
		Common application infrastructure	
		System management	
Application specialist	Software development		
	Customer service	Hardware	
	IT service management	Facility management	
	Education		
UISS	Business strategist		
	IS strategist		
	Program manager		
	IS analyst		
	IS architect		
	Project manager		
	Application designer		
	System designer		
	IS operations		
	IS administrator		
	Security administrator		
	IS staff	Management of information equipment and information assets	
		Business Continuity Planning	
		Compliance	
		Human Resource Management	
Contract Management			
IS auditor			
ETSS	Product manager	Embedded systems	
	System architect	Embedded application development	
	System architect	Embedded platform development	
	Project manager	Embedded software development	
	Bridge SE	Embedded software development	
	Development process improvement specialist	Embedded software development	
	Domain specialist	Embedded system related technologies	
	Software engineer	Embedded application development	
	Development environment engineer	Embedded platform development	
	QA specialist	Embedded software development	
Information security human resources	Test engineer	Embedded systems development	
	Consultant	Information risk management	
	IT architect	Security architecture	
	Security administrator	Information security administrator	
	Security administrator	IS security administrator	
Future IT human resources	Security manager	Incident handler	
	Security manager	Embedded security	
	Information security management		
	Information security auditor		
Additional human resources	Human resources required for the large scale projects of IT companies	Enterprise architecting	
		Business development	
		Architecture design	
		Program management	
		Technical engineering	
		Service curation	
		Business visualization	
		Application services development	
		Project management	
		Technical services development	
	Enterprise architecting		
Human resources required for the user company information system division	Business creation		
	Application services development		
	Operation analytics		
	Project management		
	Technical services management		
	Service creation		
	Operation analytics		
	Technical engineering		
	IT business creator		
	Business architect		
Cloud architect	Cloud architect		
	Business analyst		
	Data analysis specialist		
	Data utilization systems engineer		

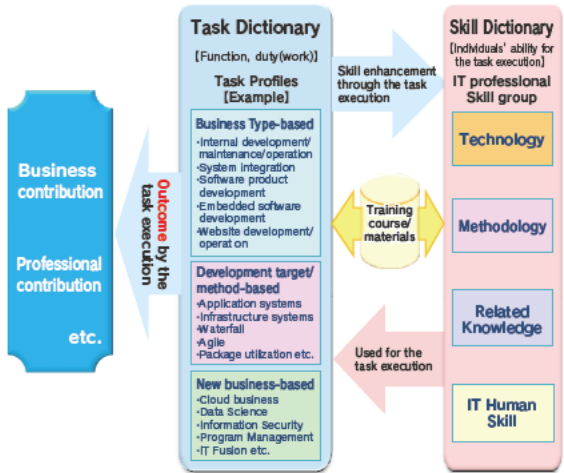
# 4 Task x Skill Correspondence Table (abstract)

This table indicates skills strongly required by each task.

Task Minor Category Code	Task Major Category	Task Middle Category	Task Minor Category	Skill Classification	Skill Item	Task Minor Category	Skill Classification	Skill Item
BT01.1	Business operations strategy formulation	Analysis of business operation strategy	Formulation of business operation strategy	Business strategy and analysis methods	Confirmation of management policy	Task Major Category	Skill Classification	Skill Item
BT01.2					Analysis of internal environment			
BT01.3					Formulation of back concept			
BT01.4					Formulation of action plan			
BT01.5	Business operations strategy formulation	Formulation of business operation strategy	Formulation of business operation strategy	Business strategy and analysis methods	Formulation of business operation strategy	Task Major Category	Skill Classification	Skill Item
BT01.6					Formulation of business operation strategy			
BT01.7					Formulation of business operation strategy			
BT01.8					Formulation of business operation strategy			
BT01.9	Business operations strategy formulation	Formulation of business operation strategy	Formulation of business operation strategy	Business strategy and analysis methods	Formulation of business operation strategy	Task Major Category	Skill Classification	Skill Item
BT01.10					Formulation of business operation strategy			
BT01.11					Formulation of business operation strategy			
BT01.12					Formulation of business operation strategy			
BT02.1	Understanding of business operations strategy and strategy formulation	Confirmation of business operation strategy	Confirmation of business operation strategy	Business strategy and analysis methods	Confirmation of management request	Task Major Category	Skill Classification	Skill Item
BT02.2					Investigation and analysis of the management environment and confirmation of business operation strategy			
BT02.3					Investigation and analysis of the management environment and confirmation of business operation strategy			
BT02.4					Investigation and analysis of the management environment and confirmation of business operation strategy			
BT03.1	Business operations strategy formulation	Formulation of business operation strategy	Formulation of business operation strategy	Business strategy and analysis methods	Formulation of business operation strategy	Task Major Category	Skill Classification	Skill Item
BT03.2					Formulation of business operation strategy			
BT03.3					Formulation of business operation strategy			
BT03.4					Formulation of business operation strategy			
BT04.1	Business operations strategy formulation	Formulation of business operation strategy	Formulation of business operation strategy	Business strategy and analysis methods	Formulation of business operation strategy	Task Major Category	Skill Classification	Skill Item
BT04.2					Formulation of business operation strategy			
BT04.3					Formulation of business operation strategy			
BT04.4					Formulation of business operation strategy			

# 5 Relationship between Task and Skill

An organization demands the task execution from an individual. And the individual acquires skills through task execution. Some skills also can be acquired from attending the education course or getting the certification. The chart shows these relationship between the Task Dictionary and the Skill Dictionary.



# 6 Release history

- ◆Apr/12/2017 Announced iCD V2
- ◆Jul/15/2016 Announced iCD V1
- ◆Jun/30/2015 Announced iCD Trial version

Jun/2017