

Power that changes the future!

NCS

NATIONAL COMPETENCY STANDARDS

National Competency Standards



NCS

National Competency Standards

NATIONAL COMPETENCY STANDARDS

Contents

- I. Overview of NCS
- II. NCS Development & Improvement Processes and the Role of HRDK
- III. Application of NCS

NCS

I.

Overview of National Competency Standards

NCS

N A T I O N A L C O M P E T E N C Y S T A N D A R D S

Definition of NCS

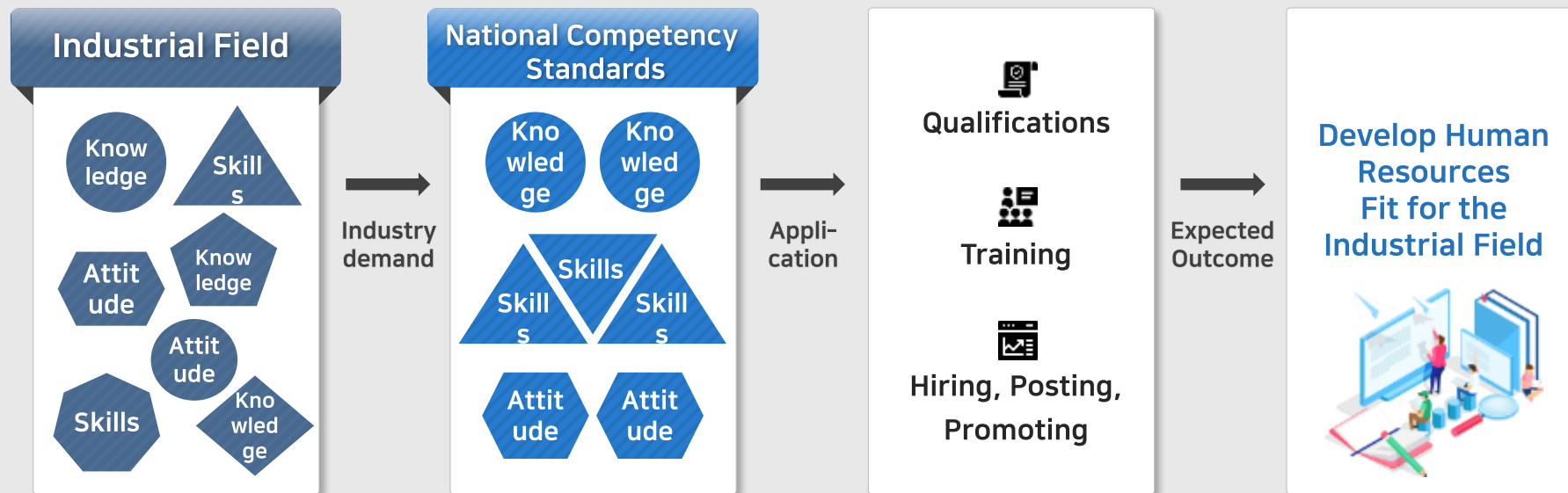
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National Competency Standards

NCS

N A T I O N A L C O M P E T E N C Y S T A N D A R D S

NCS is the standardization of competencies (knowledge, skill, attitude) required to successfully perform duties in industrial fields, which promotes field-focused talent development and systematic human resource management.



Background of NCS

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- Industrial field - education & training - skills mismatch
- Ineffective management of human resources

	Issues of National Talent Development	Advancement of National Talent Development
Workplace	<ul style="list-style-type: none"> Worsening job & skills mismatch Lack of core/high-skilled workers 	<ul style="list-style-type: none"> Specify industry's demand and needs, establish a system reflects them
Training	<ul style="list-style-type: none"> Lack of talent development of those who have required competencies for industrial fields Ineffective training 	<ul style="list-style-type: none"> Reflect changes in the industry and talent structures Develop processes applicable for the field Expand training opportunities and access
Qualification System	<ul style="list-style-type: none"> Supplier-based system Lack of applicability of qualifications in the field Lack of credibility of qualifications 	<ul style="list-style-type: none"> Reflect changes in the industry and talent structures Secure applicability of qualifications in the field (new, modified, evaluated)

Overseas NCS

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UK (NOS)

National Occupational Standards



Australia (NCS)

National Competency Standards



US (NSS)

National Skill Standards



Background

- Respond to industry demand
- Establish an occupational competency development system

- Respond to industry demand
- Establish an occupational competency development system

- Respond to industry demand
- Establish an occupational competency development system

Introduction Period

- In 1986
- Established the UK National Council for Vocational Qualifications (NCVQ)

- In 1989
- Introduced the Competency-based Training (CBT)

- In 1994
- Enacted the National Skill Standards Act

Management Agency

- UK Commission for employment and skill

- National Skills Standards Council

- National Skills Standard Board

Development Organization

- Sector Skills Council

- Sector Skills Council

- Voluntary partnerships by sector

Activities

Training

- Develop NCS-based vocational training goals and content
- Develop national competency based on NCS

Training

- Sector Skills Council

- No separate approval process required

Qualifications

Qualifications

- Apply 1,738 types of qualifications

Operating Method

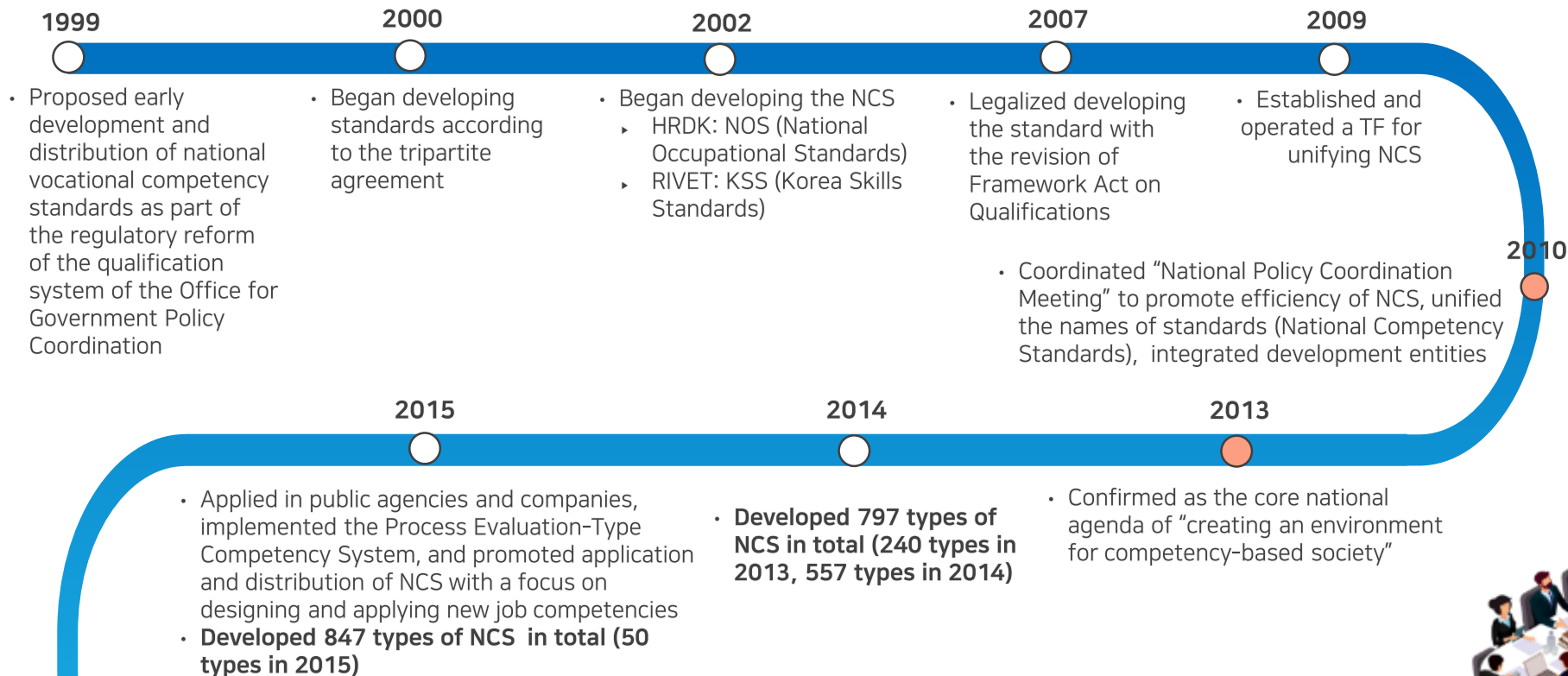
- Fund expenses for NCS development

- Fund expenses for NCS development and government-led development

- A quality control agency operated by each State government

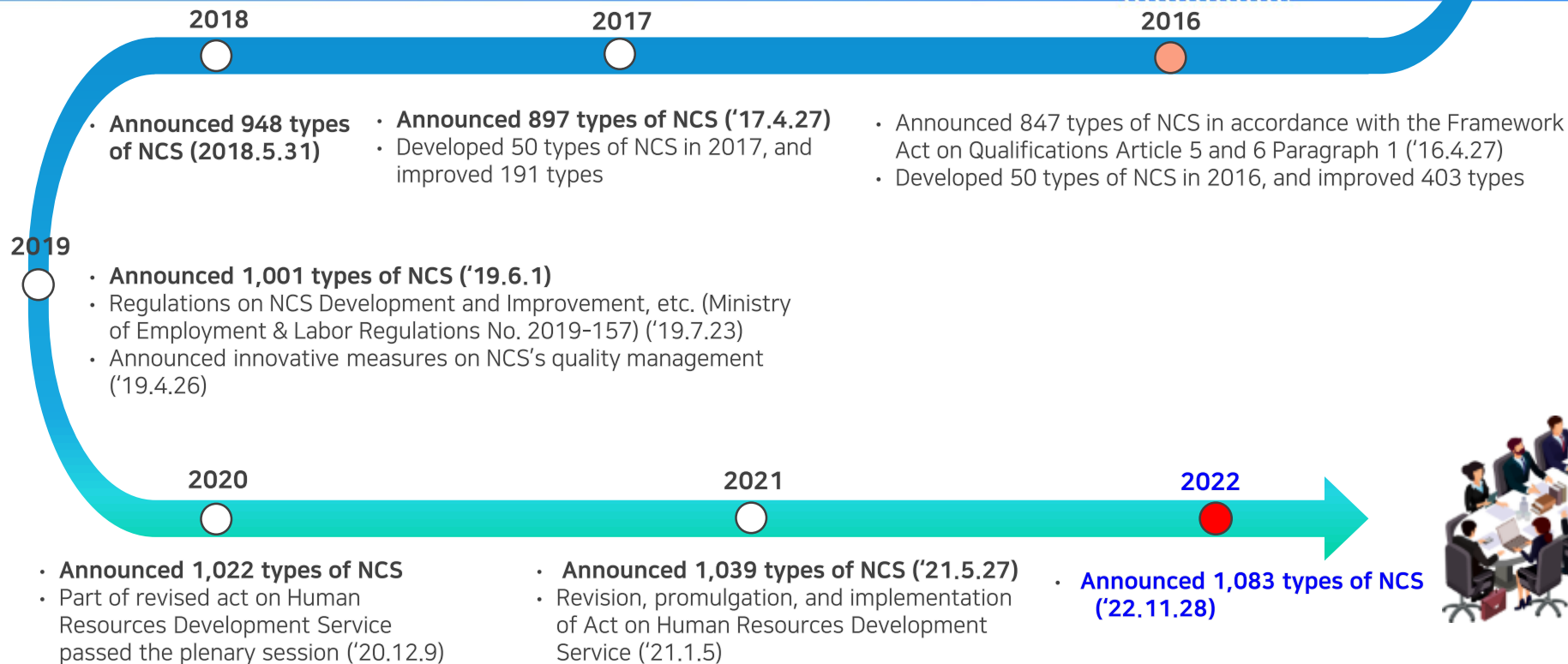
History of NCS

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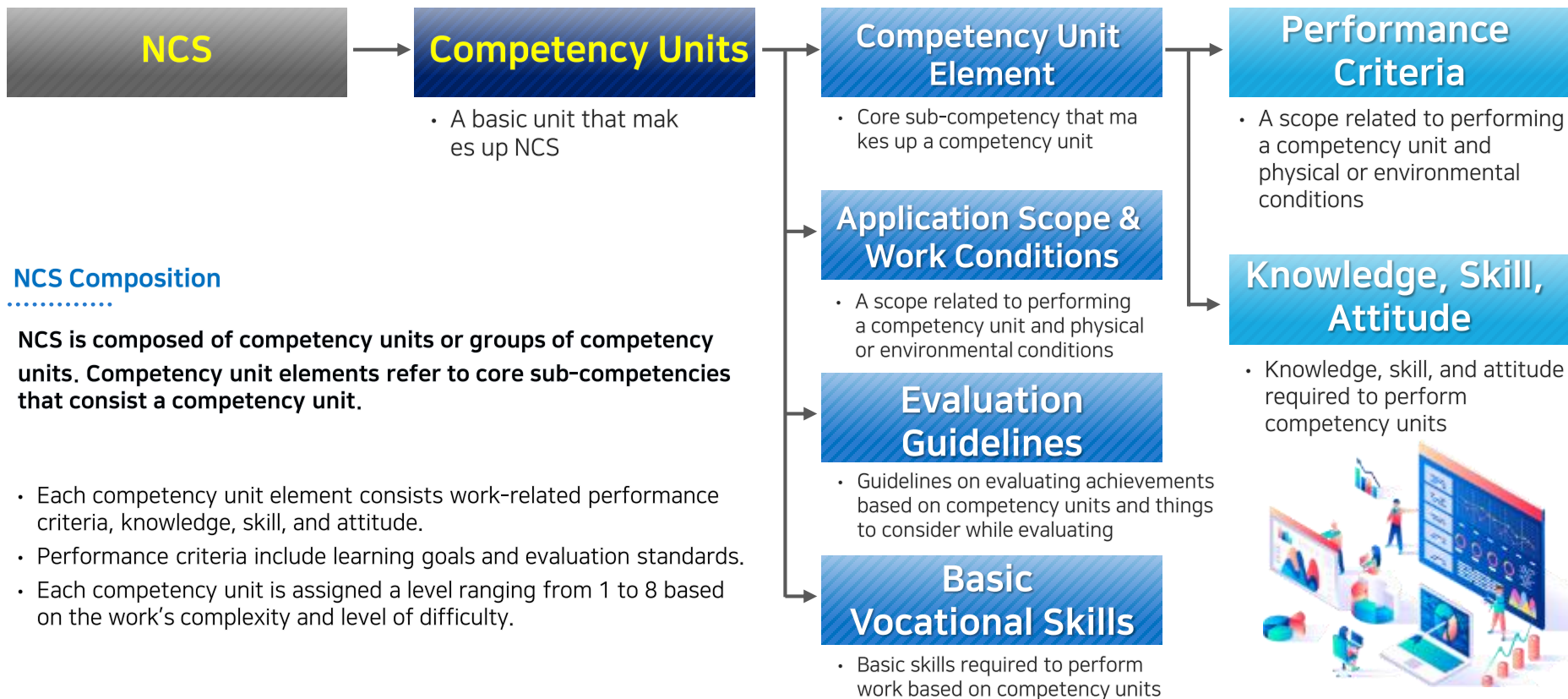
History of NCS

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Composition of NCS

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NCS Level System

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NCS Levels	Notes
Level 8	Able to perform broad-ranging technical work with the highest degree of skills in the sector and be given authority and responsibility over the organization and overall work
Level 7	Able to perform broad-ranging work with the high degree of skills in the sector and bear obligation and responsibility for others' work performance
Level 6	Able to perform a variety of work with the general degree of skills and communicate the industry knowledge and know-hows to others under independent authority
Level 5	Able to perform very complex and non-routine work and communicate industry expertise to others under comprehensive authority
Level 4	Able to perform complex and various work by applying theories and knowledge of the sector under general authority
Level 3	Able to perform somewhat complex work by applying basic theories and general knowledge of the sector under restricted authority
Level 2	Able to perform routine work by following processes and applying basic knowledge of the sector under general directions and strict supervision
Level 1	Able to perform routine work by following processes and applying basic knowledge of the sector under general directions and strict supervision

Examples of NCS

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Administrator

Administrators manage general affairs, such as managing the effective use of assets, supporting general work and benefits of employees, and maintaining the internal and external company reputation, to help the company achieve its business goals.

Type No.	Competency Units	Level	Competency Unit Elements
0202010101_19v2	Establish business plans	5	<ul style="list-style-type: none"> • Landscape analysis • Strategic task planning • Budget operation planning
0202010102_19v2	Event support management	5	<ul style="list-style-type: none"> • Event plan establishment • Event operation • Post-event management
0202010103_19v2	Real-estate management	5	<ul style="list-style-type: none"> • Acquired asset management • Lease management • Real estate disposal
0202010104_19v2	Inventory management	2	<ul style="list-style-type: none"> • Inventory purchase • Inventory maintenance • Inventory disposal



Examples of NCS

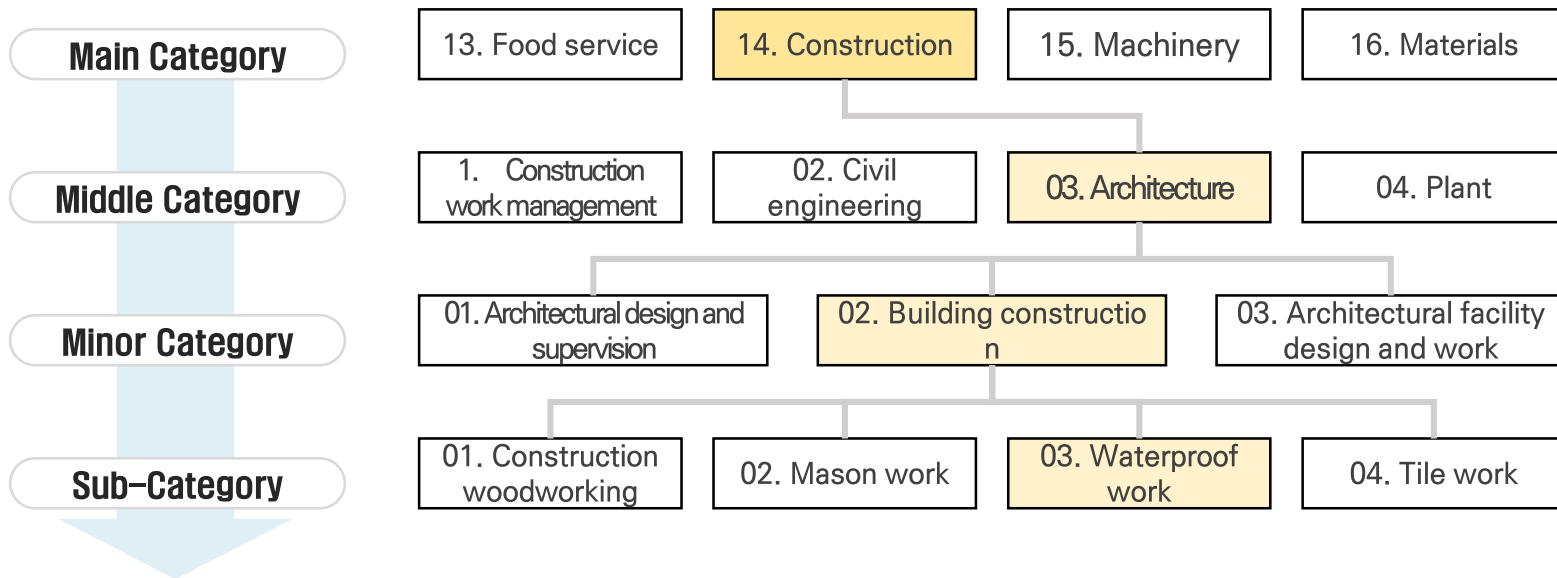
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Type No.	• 0202010101_19v2
Name of Competency Unit	• Establish business plans
Definition of Competency Unit	• Establishing business plans refers to the ability to analyze internal and external environments, set strategic tasks, and plan budget operation in order to perform general affairs for the goal of achieving business goals

Type No.	Performance Criteria
0202010101_19v2.1 Landscape Analysis	1.1 Able to analyze internal and external industry landscapes according to the company's vision and mid-to-long term business strategies 1.2 Able to understand internal and external factors that affect the function of an administrator based on the understanding of company's business strategies 1.3 Able to apply specific analysis methods to derive necessary information from the identified factors
	Knowledge <ul style="list-style-type: none"> • Industry trends • Environment analysis method • Basic financial management • Benchmarking method • Documentation skill
	Skills <ul style="list-style-type: none"> • Information collecting skills • Applying analysis methods skills
	Attitude <ul style="list-style-type: none"> • A comprehensive approach • Continuous learning • Positive interpersonal skills

Classification of NCS

- NCS is categorized into main/middle/minor/sub-categories to prevent redundancy and omission of NCS development and improvement while improving user's accessibility and usability.



NCS Competency Unit
 Classification No. (Code)

1503020301_21v1							
14	03	02	03	01	–	21	v1
Main Category	Middle Category	Minor Category	Sub-Category	Competency Units		Development Year	Version

Classification of NCS

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The screenshot shows the NCS website interface. At the top, there's a search bar and social media links for YouTube and Instagram. Below the navigation tabs, the 'NCS 및 학습모듈 검색' section is active. It displays a grid of 24 icons representing various NCS categories. The icon for '14. 건설' (Construction) is highlighted with a red box. To the right of the grid, there's a sidebar with additional search filters and links.

14. 건설

중분류	소분류	세분류	능력단위
01. 건설공사관리	01. 건축설계·검리	01. 건축목공사공	01. 조적미장시공 도면검토
02. 토목	02. 건축시공	02. 조적미장시공	03. 조적미장시공 계획수립
03. 건축	03. 건축설비설계·시공	03. 방수시공	04. 조적미장시공 작업준비
04. 플랜트		04. 타월시공	05. 기준설정 및 규준물 설치
05. 조경		05. 건축도장시공	06. 벽돌 쌓기 작업
06. 도시·교통		06. 철근콘크리트시공	07. 블록 쌓기 작업
07. 건설기계운전·정비		07. 창호시공	

* <http://www.ncs.go.kr>

Basic Vocational Skills & Job Performance Skills

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Competency = Basic Vocational Skills + Job Performance Skills

- A competency that all workers must possess
- 10 main areas with 34 sub-areas

Examples Problem solving skills, communication skills, etc.

Basic Vocational Skills

Job Performance Skills

- A specific competency required in the sector
- 24 main categories, 1,083 sub-categories, and 13,053 competency units of NCS

Examples Establishing cloud platforms, IoT system linkage, etc.

Areas of Basic Vocational Skills

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Basic vocational skills refer to common competencies required to successfully perform work regardless of occupation or job position

10 Areas	34 Sub-Areas
Communication Skills	Understanding documents, writing documents, listening, communicating, basic proficiency of a foreign language
Math Skills	Basic computation, basic statistics, chart analysis, chart creation
Problem-solving Skills	Thinking, problem-solving
Self-development Skills	Self-awareness, self-management, career development
Resource Management Skills	Time management, budget management, physical resources management, human resources management
Interpersonal Skills	Team-working, leadership, conflict management, negotiation, customer service
Information Skills	Computer literacy, information processing
Technology Skills	Understanding technology, selecting technology, applying technology
Organization Understanding Skills	International sense, understanding organizational structure, understanding management, understanding work
Work Ethics	Work ethics, community ethics

NCS

II.

NCS Development/Improvement Processes & HRDK's Role

Progress on NCS Development & Improvement

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General Progress of NCS Development & Improvement

Type	2014	2015	2016	2017	2018	2019	2020	2021	2022
	797 jobs	847 jobs	897 jobs	948 jobs	1,001 jobs	1,022 jobs	1,039 jobs	1,064 jobs	1,083 jobs
Number of Developed NCS	557 jobs including road design	50 jobs including overseas employment management	50 jobs including patent engineering	50 jobs including IoT network establishment	50 jobs including AI platform establishment	20 jobs including flexible display development	10 jobs including self-driving hardware development	10 jobs including smart factory system management	11 jobs including digital twin design
Development Organization	115 organizations including Korea Construction Equipment Manufacturers Association	30 organizations including Korea Printers Association	28 organizations including Korea Association of Robot Industry (KAR)	24 organizations including Korea Financial Investment Association	27 organizations including Korea Industrial Technology Association (KITA)	12 organizations including Korea Information Security Industry Association (KISIA)	4 organizations including Korea Electronics Association	5 organizations including Korea Association of Machinery Industry (KOAMI)	9 organizations including Korea Software Industry Association (KOSA)
Number of Improved NCS	-	79 jobs including management planning	403 jobs including machine element design	191 jobs including architecture supervision	103 jobs including injection mold assembly	100 jobs including application S/W engineering	145 jobs including machine control design	including Korean cooking 114 jobs	132 jobs including petrochemical product manufacturing
Improvement Organization	-	15 organizations including Korea Chamber of Commerce and Industry	75 organizations including Korea Financial Investment Association	47 organizations including Korea Iron & Steel Association	37 organizations including Korea Electrical Contractors Association	30 organizations including Korea Die & Mold Industry Cooperative	31 organizations including Korea Ceramics Association (KOCERA)	26 organizations including Korea Energy Engineers Association	19 organizations including Korea Chamber of Commerce and Industry

Progress on NCS Development & Improvement

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General Progress of NCS Development & Improvement

Development

- Developed 1,083 NCS reflecting changes in the industrial fields and industry landscapes during 2013-2022
- Established a virtuous cycle of nurturing talent based on industry demand by developing ISC-led NCS

Improvement

- Improved 1,599 NCS through ISC and relevant cooperation organizations during 2015 & 2022
- Applied job maps by industry sector and Sectoral Qualification Framework (SQF) to improve applicability of NCS in the field

Detailed Status of NCS Development

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- As of December 2022, developed a total of 13,053 competency units with 24 NCS in the main category, 81 NCS in the middle category, 271 NCS in the minor category, and 1,083 NCS in the sub-category
- Every year, develop about 10 new NCS (sub-category) and improve about 100 NCS, reflecting changes in the lab or market and technologies

	Main Category	Middle Category	Minor Category	Sub-Category
1	Business management	1	2	5
2	Management, accounting, administration	4	11	29
3	Finance, insurance	2	9	36
4	Education, nature, social science	2	3	8
5	Law, police, firefighting, prison, national defense	2	4	16
6	Health and medical care	1	2	11
7	Social welfare, religion	3	6	17
8	Culture, arts, design, broadcasting	3	9	61
9	Driving, transportation	4	8	31
10	Sales	3	8	18
11	Security, cleaning	2	2	4
12	Service, accommodation, tourism, entertainment, sports	4	12	46

	Main Category	Middle Category	Minor Category	Sub-Category
13	Food service	1	3	12
14	Construction	8	28	132
15	Machinery	11	36	139
16	Materials	2	10	48
17	Chemical/Bio	5	17	53
18	Fabric, clothes	3	8	26
19	Electrical, electronic	3	36	115
20	Information communication	3	17	111
21	Food processing	2	4	21
22	Printing, wood, furniture, crafts	2	4	23
23	Environment, energy, safety	6	19	67
24	Agriculture, fishing	4	13	54

Organizations & Roles Related to NCS Development & Improvement

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HRDK

HRDK 한국산업인력공단

- Manage overall NCS development and improvement (budgeting, quality control, etc.)
- Provide guidelines and manuals
- Organize and operate talent pools

Quality Control Committee

(Deliberation and decision-making body)

- Select subjects of NCS development, improvement, and abolition
- Select NCS development/improvement organizations
- Deliberate and make decisions on job categorization, name change, NCS divisions, etc.
- Manage overall quality of improvement and development on NCS quality control

Inspection Committee

- NCS quality control (more than twice)
- About 5 experts, 1-2 officials from ministries in charge

Development Team/ Improvement Team FT

FACILITATOR

- NCS development and improvement
- Utilization package development and improvement
- **Development** 7 industry, 3 education, 1 qualification
- **Improvement** 5 industry, 2 education, 1 qualification

Development/ Improvement Organizations

(ISC, SC, etc.)

- Organize development/improvement teams/host workshops
- Manage schedules for NCS and utilization package development/improvement
- Environmental analysis and industry verification (twice)
- Execute and settle project expenses
- Inspect outcomes

NCS Development & Improvement Organizations

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- When the sectors are in the Industry Sectoral Council (ISC), organizations in the ISC develop and improve NCS. If not, NCS is developed and improved by organizations selected through open contests.
- When development and improvement organizations are unable to be selected and improvements are simple, the HRDK may develop or improve on its own.

ISC Composition (As of April, 2023, 19 sectors)



NCS Development & Improvement Directions

- Depending on the ISC's capabilities, NCS may be developed or improved into two types to improve its field applicability and usage.

ISC-led NCS Development & Improvement

When NCS falls within the responsibility, the ISC in charge of the sector proactively develops and improves NCS

ISC with capabilities will lead NCS development and improvement based on job analysis and field needs

Standard Procedure-type NCS Development & Improvement

If the sector is not under ISC's responsibility, development and improvement organizations will be recruited through open calls.

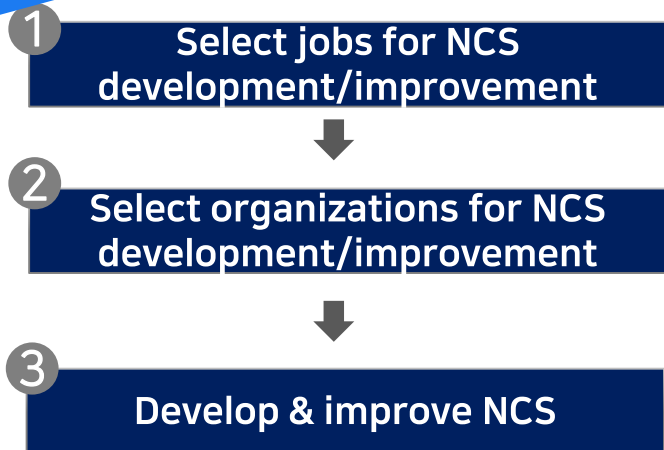
Following the given manuals, NCS will be developed and improved according to standard procedures.

Main Procedures of NCS Development & Improvement

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- NCS development and improvement projects shall be led by development/improvement organizations selected according to the “Rules and Regulations about the NCS Development/Improvement/Abolition”
- The following are the project procedures' five steps:

Steps 1-5



1) Select jobs for NCS development/improvement

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- The HDRK gathers input on NCS development/improvement from industry and associated ministries and conducts a feasibility study.
- The NCS Quality Control Committee selects jobs subject for NCS development and improvement based on the demand for workforce and trainings.

Project Content			Related
1 Development & Improvement Select jobs	[Opinion Collection]	• Discover demand from NCS Wiki (Public, website), industry, related ministries, etc.	• Industry, etc.
	[Feasibility Study]	• Assess the feasibility of NCS development and improvement based on the demand from the collected opinions.	• HRDK
	[Subject Selection]	• The NCS Quality Control Committee deliberates and decides on the jobs subject for development and improvement	• HRDK
	[Ministry-level Discussion]	• Relevant ministries confirm jobs for development and improvement among those selected through deliberation and resolution	• MOEL
	[Confirmation of Jobs]	• Finalize jobs for development & improvement	• MOEL (HRDK)

2) Select organizations for NCS development/improvement

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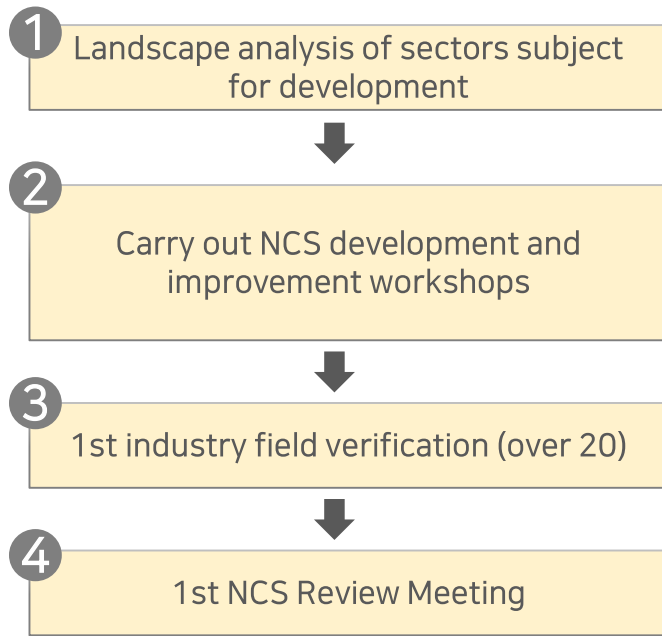
- The HRDK selects ISC as the development/improvement organization if it fits under the ISC's responsibility, and reviews the Project Plan's appropriateness.
- Any sector that falls outside of the responsibility of the ISC must submit a Project Application, which will be reviewed and selected by the HRDK based on the organization's expertise and representativeness.

Project Content			Related
2 Development & Improvement Select Organizations	[Open Calls]	• Open call for organizations to carry out development/improvement projects in sectors outside the ISC responsibility	• HRDK
	[Plan Submission]	• Participating organizations have to submit a Project Plan for NCS development and improvement.	• Development & Improvement Organization
	[Selection Evaluation]	• Assess the selection of organizations with expertise and representation. ※ The NCS Quality Control Committee selects participating organizations.	• HRDK
	[Contract]	• The HRDK signs a contract with selected organizations for NCS development and improvement	• Development & Improvement Organization • HRDK

3) Develop & Improve NCS

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Steps 1-4



Steps 5-9



3) Develop & Improve NCS

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<Landscape Analysis of Development/Improvement Sectors>

- The landscape evaluation procedure includes gathering and analyzing data from the labor market about sectors subject to NCS development and improvement, as well as generating landscape research materials.

<Landscape Analysis Procedures>



3) Develop & Improve NCS

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< NCS development and improvement workshops >

○ Number of workshops and participants

Type	Number	Total Number of Participants	Industry field professionals	Education professionals	Qualification professionals	Facilitators
NCS Development	over 5	12	7	3	1	1
NCS Improvement	over 4	10	5	3	1	1

○ The Role of HDRK during Workshops

(Pre-workshop) Confirm schedules and review materials with researchers from participating organizations

(During workshop) Monitor NCS development/improvement progress

(Post-workshop) Review workshop results and follow-up measures including several issues

3) Develop & Improve NCS

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< NCS Review Meeting >

- To ensure the quality of the NCS outcomes, the HDRK performs evaluations on them more than twice over the project duration.
- Review Meeting agenda includes
 - ① reviewing the development & Improvement outcomes,
 - ② issues related to industry field verification,
 - ③ opinion from the education and training fields,
 - ④ opinion from the public, etc.
- Organization of the NCS Review Committee: more than 6 review members

Type	NCS experts	Industry field professionals	Training professionals	Qualification professionals
Number of People	1	over 5		
Roles	Review the validity of NCS forms	Review the validity of NCS content		

III.

National Competency Standards Applications

Applications of NCS

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Training Organizations

- Develop vocational training courses
- Develop teaching materials and curriculum
- Apply to training standards



Businesses

- Competency-based hiring
- Upskilling
- Hiring, posting, etc.



Qualification Testing Institutions

- Create and modify qualification items (National technical qualification, work-study qualification, etc.)
- Develop and revise exam criteria
- Test questions & methods



National Jobs Competency Standards

Employees

- Career development paths
- Self-diagnosis tools



Status of NCS Applications

Secondary Education

- Reorganized vocational education curriculum based on NCS in high schools (2015)
- Organized (2016) and applied the NCS-based practical curriculum fully (2018) in vocational high schools

Higher Education

- Established and announced the Plan to Promote Colleges (2013)
- Operate NCS-based curriculum in 82 colleges (2017)

Vocational Training

Integrated Vocational Training Review

- From review and evaluation system to integrated review and evaluation system (2015)
- national strategic backbone industry jobs and account system in training for unemployed and including job competency developing training for employees and consignment-based training for current employees

Job Training

Public/Private Training

- (Public) Completed full application of 1,698 programs of Polytech (2015)
- (Private) 6,729 programs → expanded to 36,442 programs (2016)

Mandatory NCS-based Training Programs

- Mandatory to organize vocational training programs to include more than 40% of NCS-based trainings
- Operated NCS trainings with 90.5% of unemployed training and 82.3% of upskilling

NCS-based National Technical Qualification

- Introduced revised National Technical Qualification based on NCS (2016)
- Improved, newly created, integrated, and divided test subjects based on NCS applicable fields

Process Evaluation-type Qualification

- Revised Article 10 of the National Technical Qualification Act (2014)
- Introduced process evaluation-type qualification system targeted for fields

Qualifications

Work-Study Qualification

- Act on Support for Industrial Field Work-Study (2020)
- Introduced the Korean apprenticeship training system

Recruitment

Recruitment at Public Agencies

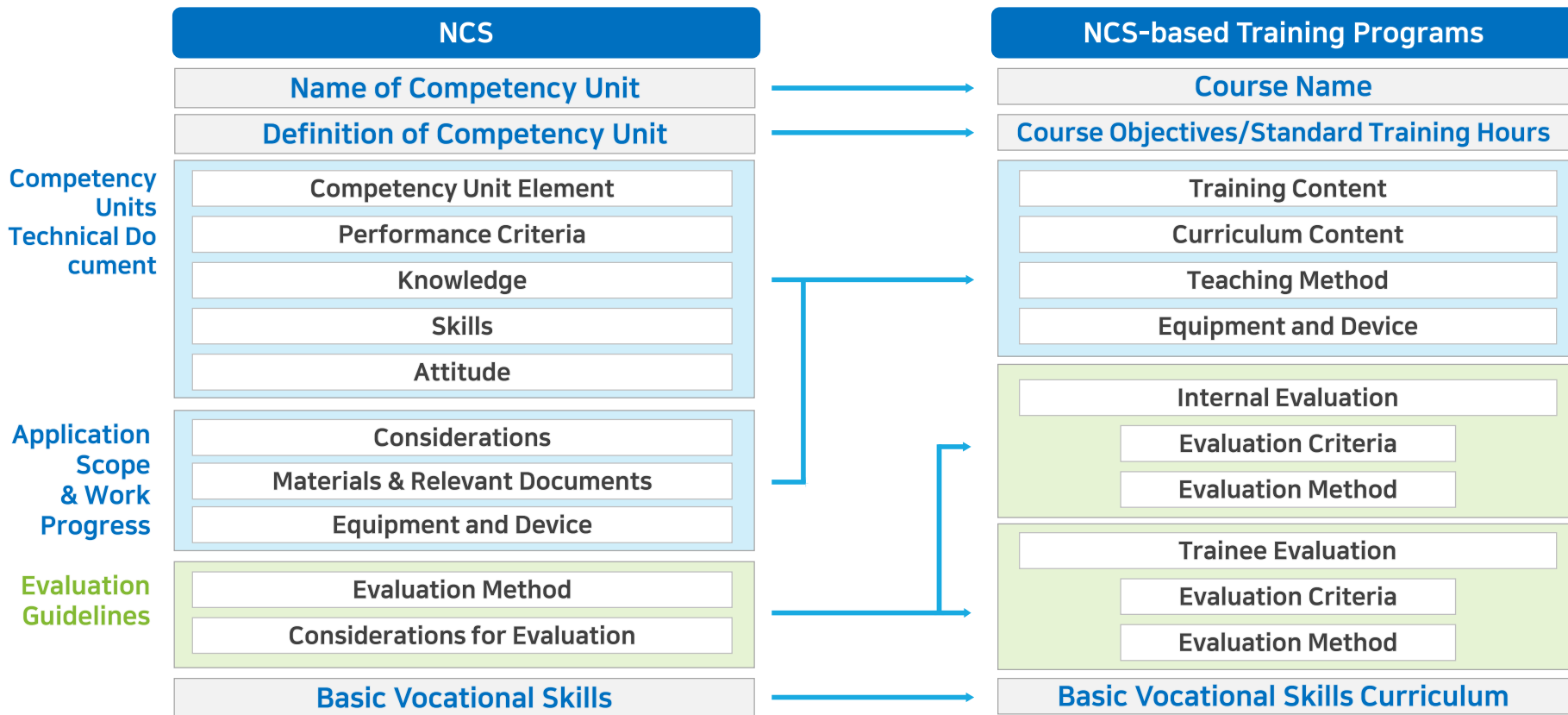
- Ministry of Strategy and Finance announced the "Promotion Plan for the Workforce at Public Agencies" (2016)
- 330 public agencies implemented and operated the NCS-based talent-based recruitment system (2018)

NCS Consulting

- Support recruitment consulting for public agencies
- Provide consulting for 5,784 private companies in recruitment and upskilling programs

Mandatory NCS-based Training Programs

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Examples of NCS-based Training Programs

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Overview of Training Programs

Name of Training Programs

• Room management

Training Period (Hours)

• March (300 hours)

Training Level

• Level 3

Training Subject

• New job seekers in the Room Management field
(language, interpersonal skills)

Training Objective

• Able to create the best room products by managing reservation check in and out, housekeeping, hotel laundry management for the convenient and pleasant stay of customers.



Examples of NCS-based Training Programs

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Training Program Overview

1. Course Training Hours

Total hours (%)	300 (100%)
NCS Knowledge Courses (%)	30 (10.0%)
NCS Major Courses (%)	180 (60.0%)
Non-NCS Courses (%)	90 (30.0%)

- NCS application rate is 60%
- When the total training hours are below 350, NCS knowledge courses are not recognized as NCS-applied courses.

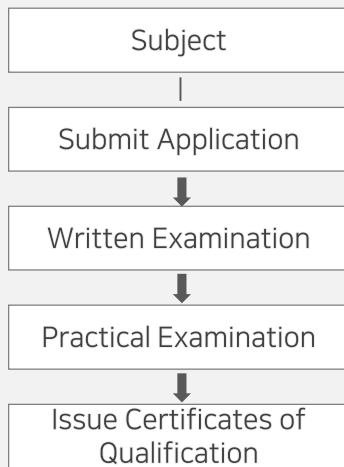
2. Course Composition

Type		Course Name	Training Hours	Training Instructor	Competency Unit Type No. Competency Unit Name (Chapter Name)	Training Hours	Notes
Total			300	-		300	
NCS Knowledge Course	Subtotal		30	-		30	
	Basic Vocational Skills		30	Soyang Kim	Communication Skills	15	
					Interpersonal Skills	15	
NCS Major Course	Subtotal		180	-		180	
	Practical Experience	Room Service	70	Gildong Hong	1203020201_13v1 Room Reservation	30	
					1203020202_13v1 Check-in	20	
					1203020206_13v1 Check-out	20	
		Customer Service	30	XXX	1203020508_13v1 Customer Service Center	30	
		Housekeeping Maintenance	30	XXX	1203020208_13v1 Housekeeping Maintenance	30	
		Hotel Laundry Management	20	XXX	1203020210_13v1 Hotel Laundry Management	20	
	Tour Product Recommendation	30	XXX	1203020202_13v1 Product Recommendation	30		
Non-NCS Major Course	Subtotal		90	-		90	
	Theory	Hotel Management	20	XXX	Overview of Room Management	10	
					Safety Management of Hotel Facilities	10	
		Marketing	25	XXX	Marketing 101	10	
	Marketing Theory of Attracting Customers				15		
	Practical Experience	Hotel Room Management	45	XXX	Bed Setting	20	
					Room Arrangements	25	

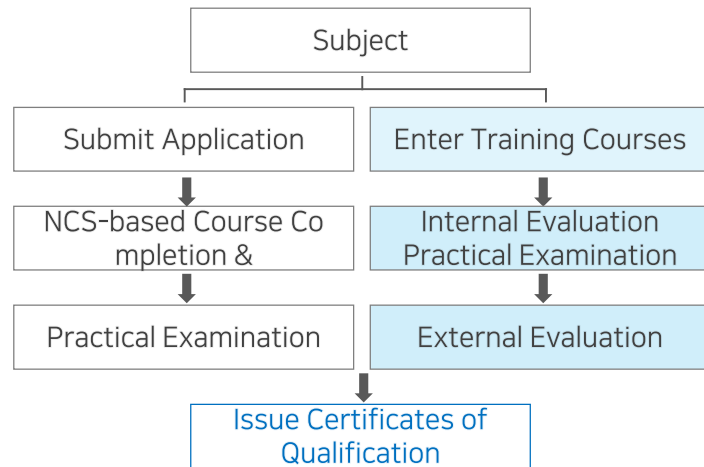
NCS-based National Technical Qualification

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Past (Qualification test type only)



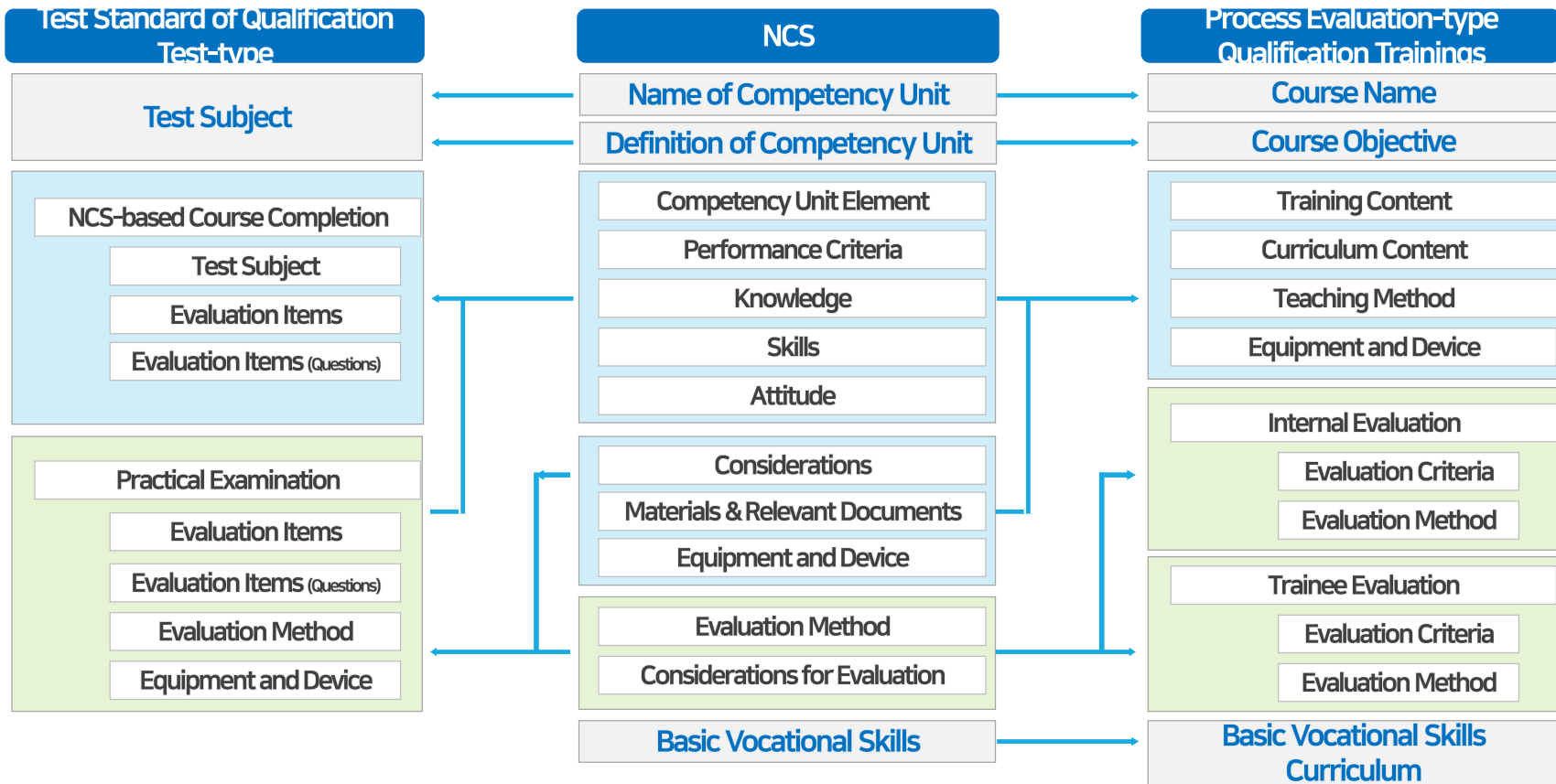
Current (Qualification test type, process evaluation type qualification)



* As of 2022, only 178 subjects of process evaluation type are in use out of 546 subjects

Design of NCS-based National Technical Qualification

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Support Consulting for Companies that Apply NCS

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- A government project to fund small to medium-sized companies to nurture core talent in recruitments and upskilling programs

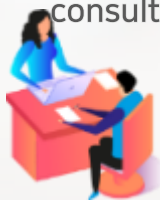
* As of 2022, expected to fund 460 companies per year

Type
01

Basic Type (Job analysis)

Job analysis and job redesign
for the entire company

Consulting and
consulting-related trainings



Type
02

Expanded Type (Recruitment/training applications)

Based on the job description,
identify capacity models and
provide consulting for recruit
ment and training



Type
03

Basic + Expanded (Job analysis + recruitment/training applications)

Basic consulting
+ expanded consulting





Thank you!

