



5.1. Management of training programmes at STUK

Regional Workshop on the Management of Training Systems for Nuclear and Radiation Safety

16/11/2022 Manila, Philippines

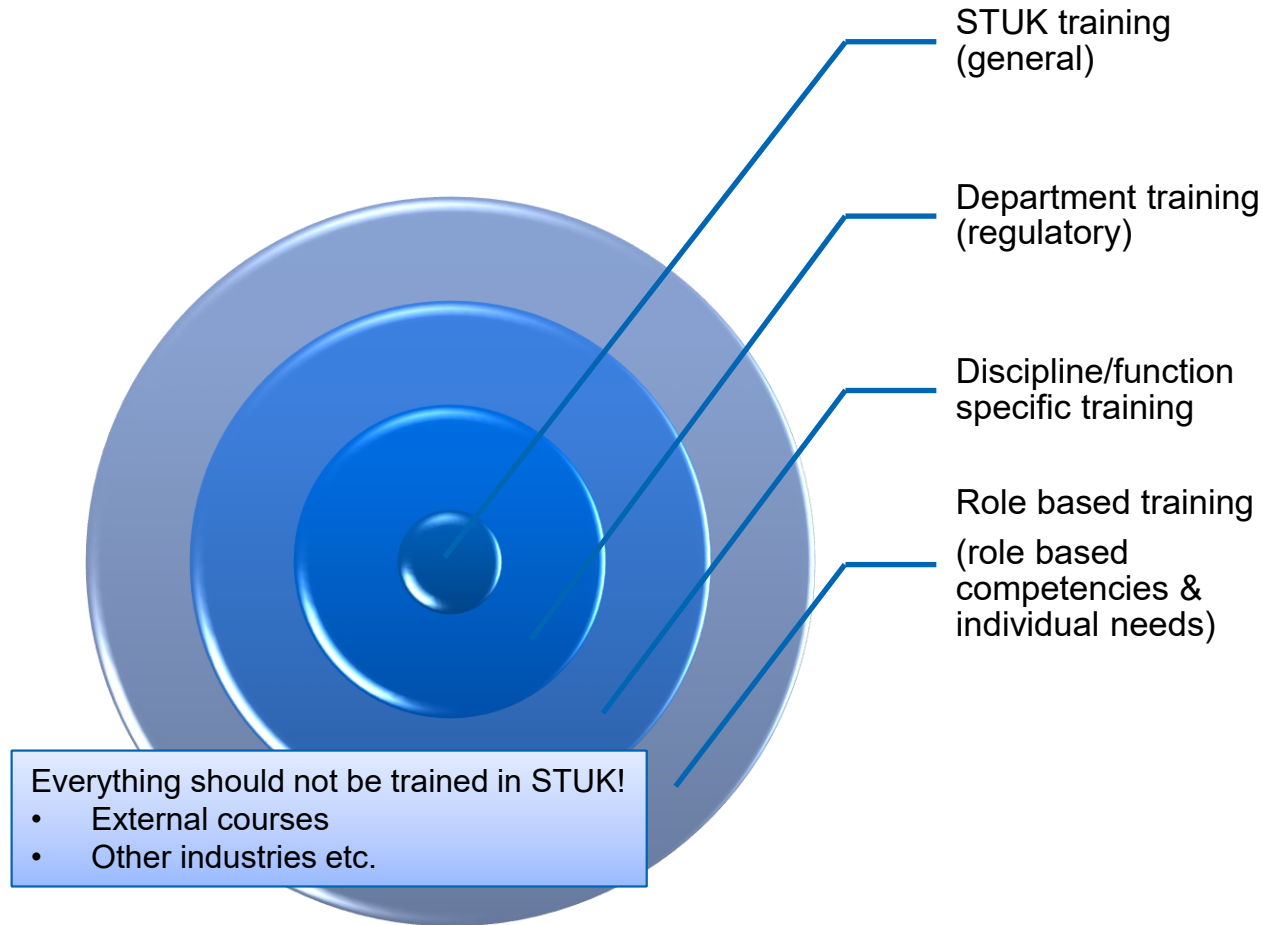
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Training system in STUK

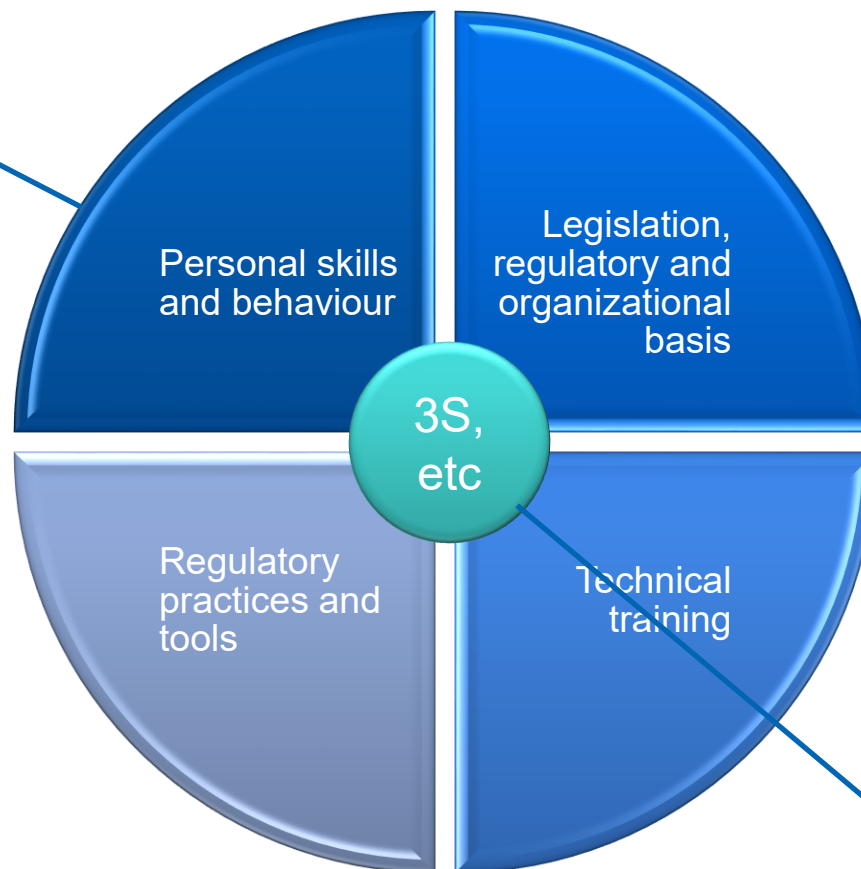
- STUK's training system incorporates the training needs - arising from different departments and their units - as one system.
- Many of the items of the training system are not conducted by STUK as external service providers and networks are utilized
- STUK's relatively small yet specialized organization is a challenge for the shared structures and contents
 - 'Shared fundamentals and customized details needed'
 - Very few 'inspectors' have a completely similar role e.g. in the area of nuclear reactor regulation department

Different levels of training in STUK



Overall topic areas of regulatory training in STUK

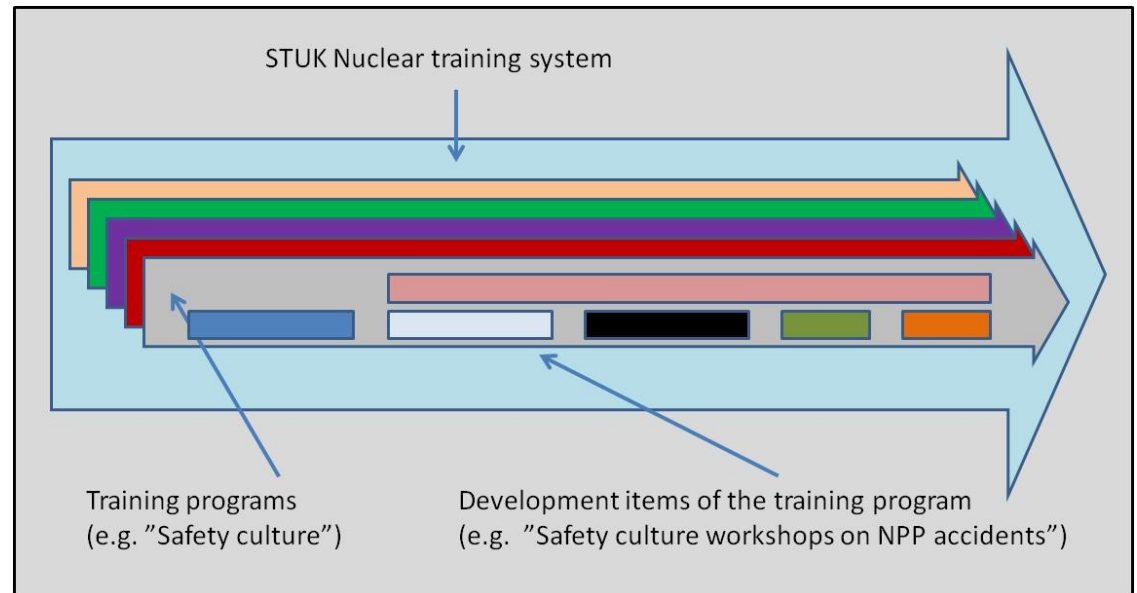
Each topic area consists of training programs



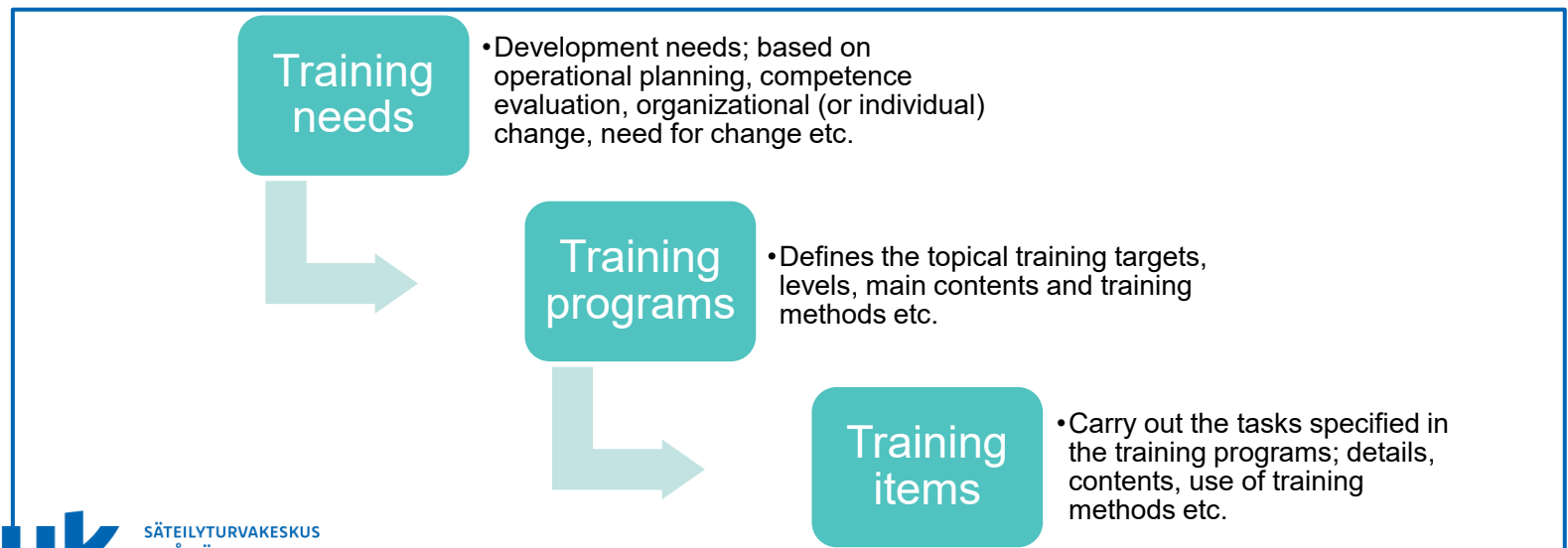
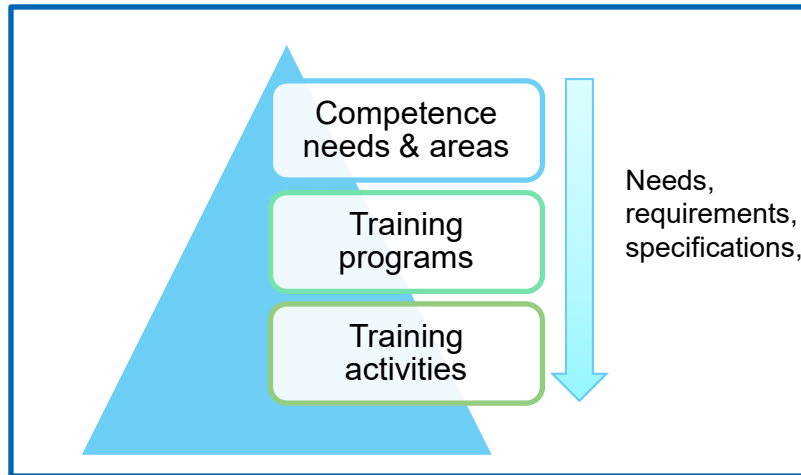
Training items related to e.g. 3S and STUK's strategic change are integrated into all four topic areas.

STUK's training programs

- Each training program has elements for different target groups
 - e.g. basic, advanced and specialized training
- Formal classroom training is only one method used in execution of the programs; external training courses are also included into programs.
- Highlighting the training needs of e.g. inspectors provides feedback for evaluation of training programs and training system.



Training programs steer the individual training activities



Training program and training descriptions

Ydinvoimalaitosten valvonta
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Sisäinen
[Pvm]

[Asianro]
[Julkisuus]

Toimintajärjestelmä - koulutusohjelmakuvaus

Tämä koulutuskortti kuvaa sillä esitetyn koulutusohjelman pääpiirteet sekä siihen liittyvät vastuut ja menettelyt. Koulutusohjelmakuvaus päivittämisestä vastaa ohjelman vastuhenkilö, jota tukevat vastuulliset kouluttajat sekä koulutuksesta vastaava henkilö. Tämän koulutusohjelmakuvaus ajantasaisuus tarkistetaan vuosittain – tai kun koulutusohjelman sisältöön tehdään merkittäviä muutoksia.

1	Koulutusohjelman nimi	Toimintajärjestelmä
2	Tunnus	mjm täyttää
3	Koulutuskategoria (SARCoN)	mjm täyttää
4	Koulutusohjelman vastuhenkilö(t)	Kaisa Koskinen
5	Koulutusohjelman tarkoitus ja päätavoitteet	<p>Koulutusohjelma tähtää siihen, että henkilö tuntee STUKin ja YTON toimintajärjestelmän tehtävänsä vaadittavalla tasolla. Hän osaa navikoida järjestelmissä ja ymmärtää sen sisäisen hierarkian.</p> <p>Tuntee STUKin laatu- ja turvallisuuspolitiikan ja toimintaperiaatteet. Ymmärtää oman tehtävänsä linkittymisen näihin. Tuntee STUKin keskeiset prosessit ja ymmärtää niiden merkityksen omassa työssään.</p> <p>Perehdytysvaiheessa...</p> <p>Pätevöintivaiheessa...</p> <p>Yleisen koulutuksen avulla koulutusohjelma...</p>
6	Koulutusohjelman keskeiset aihealueet ja sen sisältämät avainkäsitteet	<ul style="list-style-type: none"> toimintajärjestelmä laatujärjestelmä prosessit ja proseduurit
7	Koulutusohjelman sisältämät kurssit yms. vastuuhenkilöineen	<p><u>Perehdytys:</u></p> <ul style="list-style-type: none"> STUKin esittely (koulutus); STUKin päätoiminnot ja organisaation esittely (HEP) <p><u>Tarkastajapätevyys:</u></p> <ul style="list-style-type: none"> STUKin toimintajärjestelmä (Kaisa Koskinen) Keskeiset STUK-ohjeet ja prosessit (Kaisa Koskinen ja Erja Kainulainen) YTV-ohjeet (Erja Kainulainen) Toimistokohtainen perehtyminen keskeisiin YVL- ja YTV-ohjeisiin (esimies ja YVL-workshop) Tarkastajan perustoiminnan valmennus: esim. kuuleminen, päätösasiakirjat, esittelymuistiot (Päivi Salo)

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		<p><u>Yleinen koulutus:</u></p> <ul style="list-style-type: none"> <p><u>Ulkopuolinen koulutus:</u></p> <ul style="list-style-type: none"> Lead Auditor-koulutus tarkastustyöhön suuntautuville <ul style="list-style-type: none"> Pakollinen johtamisjärjestelmää arvioiville Muille suositeltava
8	Koulutusohjelman pääkohteet ja osallistujat	<p><u>Perehdytys:</u></p> <ul style="list-style-type: none"> Kaikki YTON ja YMON työntekijät <p><u>Tarkastajapätevyys:</u></p> <ul style="list-style-type: none"> Yhteiset koulutukset: kaikki YTON ja YMON työntekijät <p><u>Yleinen koulutus:</u></p> <ul style="list-style-type: none"> Koulutuksen määrittelyn mukaan <p><u>Ulkopuolinen koulutus:</u></p> <ul style="list-style-type: none"> Koulutuksen määrittelyn mukaan
9	Käytetyt menetelmät	<ul style="list-style-type: none"> luennot ja seminaarit itseopiskelu ja harjoitukset pienryhmätyö seuranta ja mentoringi
10	Koulutusohjelmassa käytettävät arviointimenettelyt	<ul style="list-style-type: none"> tentit palautekyselyt
11	Koulutusohjelman kehittäminen	Vuosisuunnitteluprosessin mukailu - kehitystarpeiden vuosittainen arviointi.
12	Muuta/linkitykset	<ul style="list-style-type: none"> - SAHA-koulutus (tarkastustyökälyt) - Auditointikoulutus (laadunhallinta) -
13	Koulutusohjelman materiaalit ja muut liitteet	<p>SAHA-linkki:</p> <p>Muut linkit:</p>

System of planned programs and activities

- Training activities engage a variety of experts with different levels of competence
- The training system require systematic work e.g. evaluation of needs, planning, design, execution and evaluation of the activities and their effectiveness
- The system needs to be revised on a regular basis
 - to ensure the quality, necessity and timeliness of its contents
 - a good training system applies the principles of continuos development
 - to evaluate the effectiveness of procedures etc.

Mitigating the risk of detachment

Avoiding the detachment

- Network for training
 - Understanding of STUK's operations and their needs
- Active role in daily life of an organization
 - Gaining and maintaining the understanding
 - Synchronized planning processes
- 'Competencies' defined, evaluated and linked with main training elements
- Co-operation internally (all levels of the organization) – and externally
- Ability and willingness to adjust when it is needed
 - 'Let's not fall in love with our old ideas and structures'
- "Different but not different!" – good practices from other industries etc.
- IMS support for the training activities

Qualification training of a STUK inspector



Role of an inspector in STUK

- In general, STUK's the inspectors (e.g. in Nuclear Safety) are not divided into specific roles of Licensing Specialist, Safety Assessor, Inspector, as the oversight of licensing, safety assessment and inspections are processes of STUK's regulatory framework.
- The role of an individual inspector develops gradually from basic tasks to more demanding ones.
 - Gradually developing, general understanding of various oversight processes
 - Specialization in
 - Oversight processes etc.
 - Technical matters etc.
 - Broader understanding; generalist profile

Inspector Qualification Process in STUK

- The qualification process produces formal qualifications as an output
 - Qualification is a requirement to carry out appointed oversight activities (e.g. inspections) independently
 - An inspector's tests and a display of maturity (work samples) are required
- Different departments have different qualification processes and procedures (e.g. radiation surveillance, nuclear safety oversight)
- Each new inspector has a personalized, initial qualification program (personal qualification plan)
- The objective is to maintain consistency and stability of regulatory control and e.g. to prevent excessive subjectivity in decision making by individual staff members.

Inspector Qualification Process in STUK

- To secure and to ensure the development of "adequate level of expertise"
 - General and shared competence areas
 - Specialized competence areas
- Initial Qualification Plans pay attention to
 - needs of the specified role and responsibilities
 - professional background
 - academic background
 - personality factors
- Time span for the initial inspector qualification vary (from 6 months to 2 years)
 - "The qualification is a good starting point for further professional development"
- Continuous need (and demand) for personal development
 - personalized development plans
 - Inspector test periodically
- Unit specific qualification training for 'transferring inspectors'

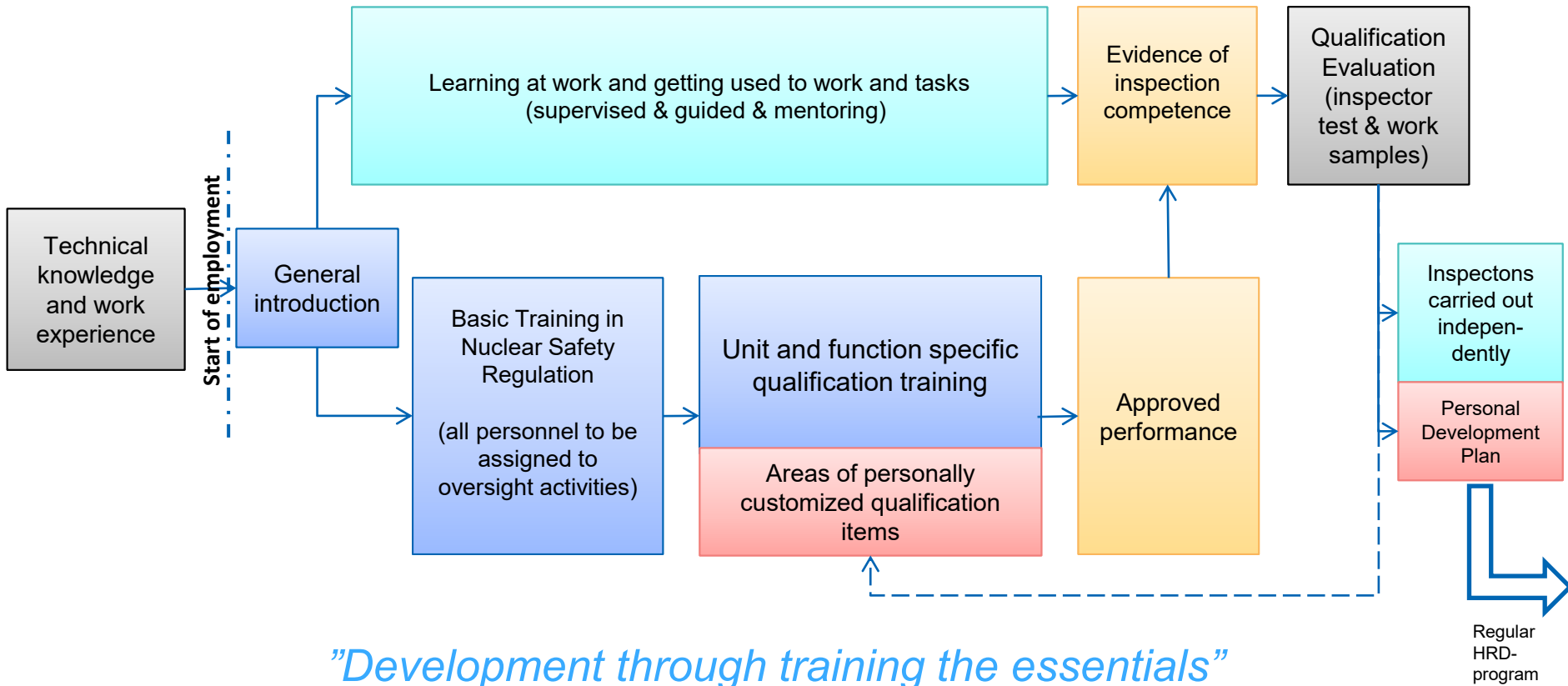


Inspector Qualification Process in STUK

- Inspector qualification process
 - Improves and harmonizes the level of basic knowledge and skills among the inspectors
 - Provides a structured framework for qualification and introduction actions
 - Monitors the implementation of the process
 - Ensures that the different elements of the qualification are developed continuously – based on the feedback and the results achieved
- Initial qualification consists of two main elements for learning:
 - On-the-job learning/training & mentoring
 - Formal training (and other development elements)
 - Trainings are categorized in general introduction, general inspector training and unit specific qualification training
 - These structures are complemented by external training courses and programs as needed (personal plan)

Initial inspector qualification of Nuclear Reactor Regulation dept.

"Development through everyday work"



"Development through training the essentials"

Inspector Qualification: Basic Elements

On-the-job learning

General STUK introduction

(e.g. STUK information, common instructions, STUK's security etc.)

Inspector Training in Nuclear Safety Oversight

(e.g. nuclear safety, nuclear engineering, regulatory framework, management system, NRR activities, inspection tools, quality management, knowledge of national NPP solutions, NRR inspection programs, safety culture etc.)

Discipline/domain specific inspector training

(technical and other topics that are specific for the domain in further details e.g. I&C systems, pressurized equipment, inspection practices, methods and tools, real-life examples, specific regulation and requirements etc.)

Customized content based on the initial level of competence and the targeted role as an inspector

General training provided to all inspectors/staff

Qualification of an inspector as the gateway to oversight work & continuous learning

- Qualifying for 'the ground floor' of e.g. technical discipline, project role
- 'Qualification as a filtering process'
 - Ensuring
 - the adequate competence
 - the common knowledge and role based KSA
- Special attention to professionals returning to work or changing their responsibilities / roles





Questions?



Thank you!

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