

# Recent reforms and innovations in the Nordic vocational education and training (VET)

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# Outline of presentation

- ✧ Background factors of the Nordic countries
- ✧ Recent Danish VET reforms and innovations
- ✧ Recent Norwegian VET reforms and innovations
- ✧ Recent Swedish VET reforms and innovations
- ✧ How have the Nordic VET systems met recent reforms?
- ✧ Features of the Nordic VET systems
- ✧ Collaboration between education and work
- ✧ What kind of VET and skilled workers are needed in the future?

## Score on VET indicators in Finland, Denmark, Norway, Sweden and in the EU in 2011/12 (Cedefop 2014)

Activity	Finland	Denmark	Norway	Sweden	EU
IVET students as % of all upper secondary students	69.6	46.1	52.6	56.3	50.3
IVET work-based students as % of upper secondary IVET	16.8	96.8	27.6	-	27.0
Female IVET students as % of all female upper secondary students	66.9	40.9	45.7	53.4	44.7
Adults in lifelong learning (%)	24.5	31.6	20.0	26.7	9.0
Early school leavers (%)	8.9	9.1	14.8	7.5	12.8
30-34 year-olds with tertiary attainment (%)	45.8	43.0	47.6	47.9	35.8
NEET rate for 18-24 year-olds (%)	11.8	8.8	7.0	10.5	17.0
Unemployment rate for 20-34 year-olds	10.4	10.4	4.6	11.3	14.5
Employment rate for 20-64 year-olds (%)	74.0	75.4	79.9	79.4	68.5

## *Characteristics of the Danish VET system*

- ✧ The dual Danish system: many of the programmes match closely specific occupations in the labour market. The quality of the Danish system is based on the occupational principle.
- ✧ The highest priority is achievement of vocational qualifications and employability of apprentices.
- ✧ VET programmes have a weak tradition of individual choice of subjects and modules and weak connection to higher education.

## *Danish reforms and innovations: a new hybrid programme, eux*

- ✧ The Danish VET system has introduced *the eux programme* that cuts across the divide between general and vocational tracks in upper secondary education.
- ✧ The eux programme integrates eligibility for HE with certificate for employment as a skilled worker (skilled worker certificate) in 2010.
- ✧ The eux programme is positioned in between two programmes: the dual system and Vocational Gymnasium, is a combination of two programmes: 3-year Gymnasium and a four years apprenticeship.  
> Eux 4-years and 1-2 months.

## *Danish innovations – training centres in vocational schools*

- ✧ The training centres were established in 2013 and are built as a renewal of the SKP (Danish skolepraktik).
- ✧ The purpose of the training centres is to coordinate the students' multiple, shorter placements in different companies and to supplement this with school-based training.
- ✧ The position of the Danish training centres resembles that of the Norwegian local training centres (opplaeringskontorer).

## *Danish innovations - Practicum*

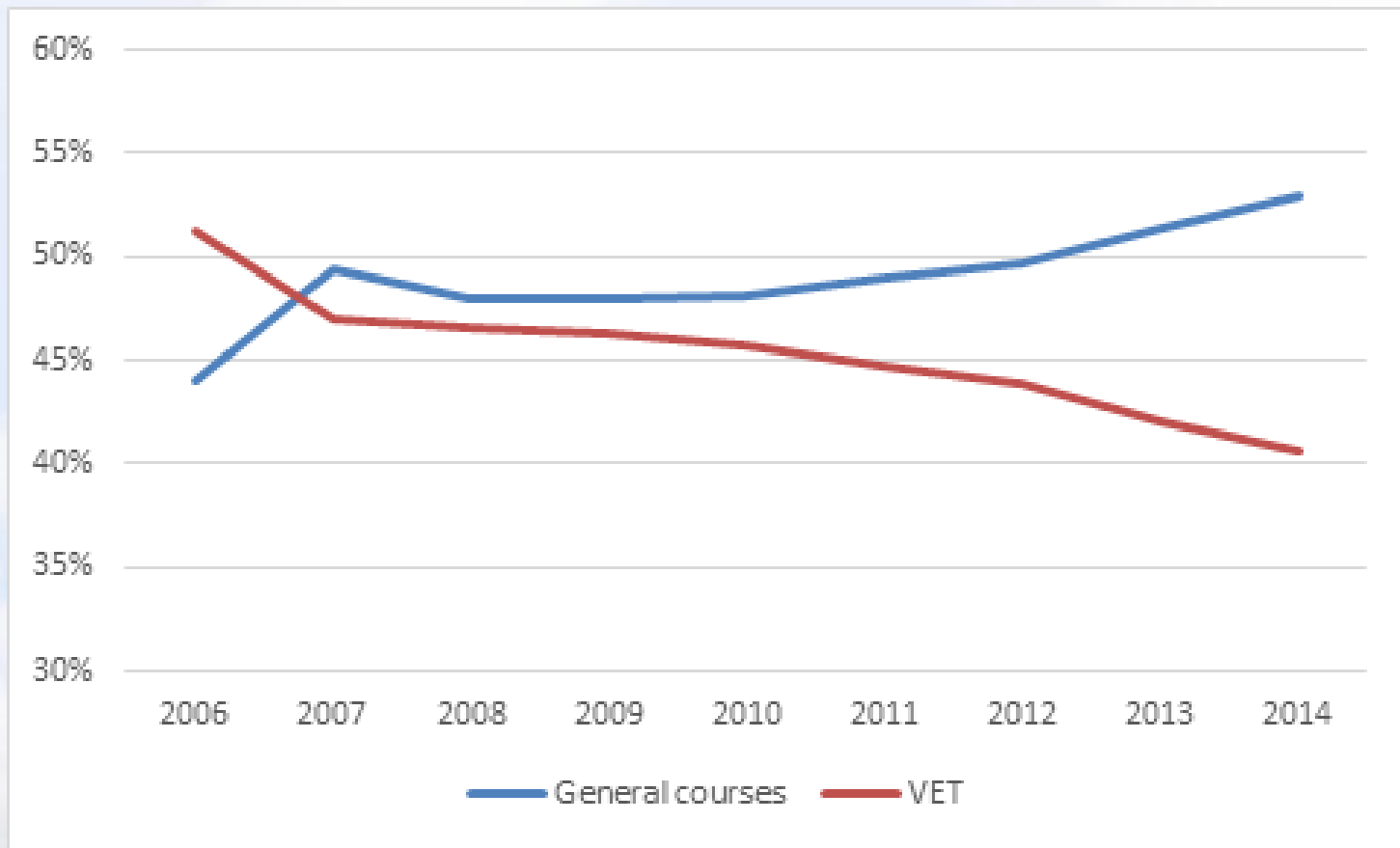
- ✧ Practicum was introduced to connect education and work in 2015.
- ✧ Practicum refers to a model project that was designed to develop new types of partnerships between schools and companies.
- ✧ The practicum is a kind of "third learning environment" situated between the vocational school and training company.
- ✧ The idea of the Practicum model is that the student, the company and the school jointly define a developmental project or a work task which involves both the company and the school.
- ✧ Practicum has been most successful in the building painter occupation.

# Characteristics of the Norwegian VET system

- ✧ School-based and firm-based VET: 2 + 2; different from normal apprenticeship system; increase of theoretical subjects
  - The apprenticeship scheme became a part of the upper secondary education system.
  - Raise the general status and educational standards of the apprenticeship system.
  - Replacing a dual-like system
  - A high level trust among stakeholders
  - A strong tri-partite cooperation at national, county and
- ✧ Hybrid track combining general and VET subjects
- ✧ Challenges:
  - Connections between apprenticeship system and HE
  - Connections between education system and apprenticeship system



*16-year-olds applying to general and VET programmes in Norway  
(Olsen, Høst & Hagen Tønder, 2014)*



## Norwegian VET reforms – TAF and Journeyman's Certificate

- ✧ Special track in "technical general studies" (TAF), which integrates the full VET programme with a full general education and practical experience as the basis for higher education to strong learners.
  - Hybrid track was developed by a local initiative in cooperation with a VET school and surrounding manufacturing industry.
  - The main idea is that a comprehensive 4 year track ends with both a Journeyman's Certificate and university and college admissions certification.

Cf. In Finland, the double qualification combines a general upper secondary education certificate and VET qualification.

## *Certificates of Competence and Practice Scheme*

- ✧ With the Journeyman's Certificate students can apply for post-secondary vocational colleges (fagskoler), but not normally for colleges.
- ✧ Special scheme "Certificate of Competence" offering individual plans for learning in the workplaces for weak learners (students having disabilities).
- ✧ Certificate of Practice Scheme: a qualification at a lower level after two years of experience in a workplace. The scheme has not yet been established as an ordinary part of upper secondary education.

## *The role of training agencies in Norway*

- ✧ One structural innovation in Norwegian VET has been the emergence of local training agencies
- ✧ Local Training Agencies (LTAs) was launched as an important policy instrument for apprentice training reform.
- ✧ The training agencies organize a majority of training firms in the Norwegian apprenticeship system.
- ✧ The training agencies provide a crucial link between local government and employers. They are subject to a legal framework that regulates training quality and public resource provision.

## *Challenges of the Norwegian VET*

- ✧ Dropout – one out of three VET students have not completed their exams within five years
- ✧ Lack of apprenticeship places
- ✧ Increasing number of students switch from VET programmes to academic programmes

# *The Swedish VET system*

*Three broad orientations in upper secondary education:*

- ✧ A. General education, mainly for those intending to pursue higher education
- ✧ B. School-based vocational programmes
- ✧ C. Workplace-based apprenticeship
- ✧ The mismatch between school and labour market needs for skills provisions in different sectors have also been a pivotal factor for the rise of innovative forms of organising networks and partnerships between schools, companies and labour market partners.

## *Distribution of upper secondary students (year 1) by Swedish programme (Persson Thunqvist, 2015)*

<b>Educational programmes</b>	<b>1999/2000 %</b>	<b>2007/2008 %</b>	<b>2009/2010 %</b>	<b>2012/2013 %</b>
<b>General (gymnasium)</b>	51,2	46,7	53,3	58,7
<b>Vocational</b>	48,8	39,4	33,6	27,5
<b>Individual</b>		13,8	13,2	13,7

## *The 2011-reform (GY-11)*

- ✧ The 2011-reform (GY-11) of upper secondary school comprises apprenticeship a regular part of the gymnasium.
- ✧ The establishment of apprenticeship programmes in the school-based system has met some problems.
- ✧ The Swedish apprenticeship programmes lack a fix structure between school-based VET and workplace-based learning.
- ✧ The Gy-11 reform has also been criticised for lacking a long-term perspective on future demands in the labour market and economy, and for pursuing the interests of local firms at the expense of national interests.



## *Other innovations in the Swedish VET - Technical College and Healthcare College*

- ✧ One of the innovations concerns the development of Technical College and Healthcare College. These cases represent innovative ways of organizing cooperation between three central parties in the field of initial VET: employers, unions and schools.
- ✧ The most profound change of initial VET in Sweden could be attributed to the increased decentralization and marketization of upper secondary education.

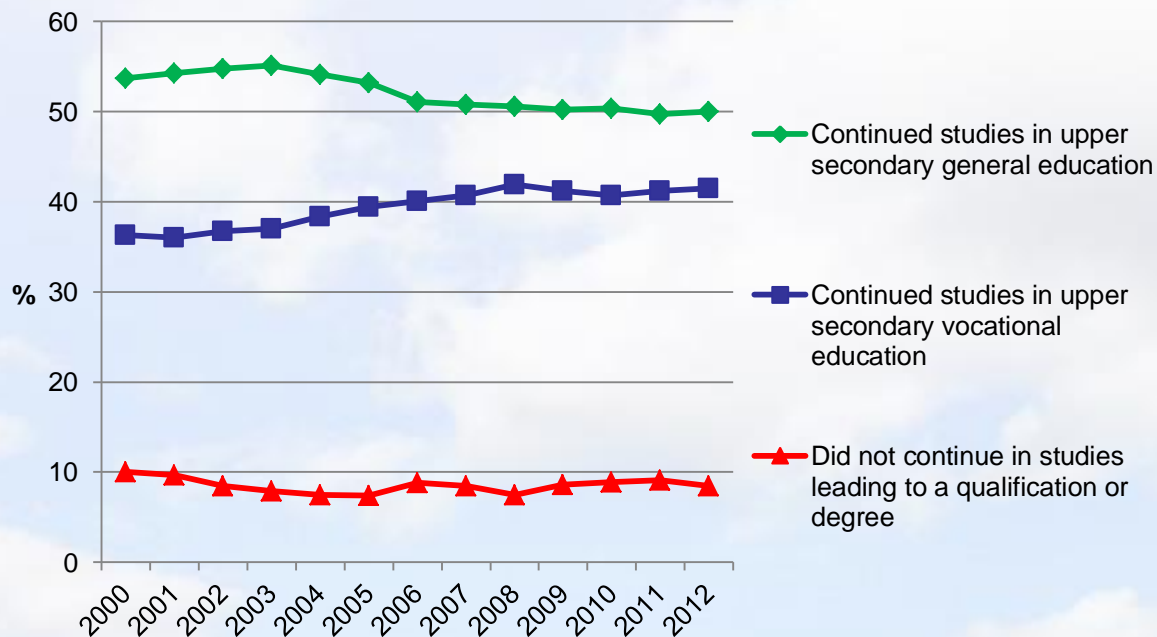
## *Major challenges in the Swedish VET*

- ✧ High levels of drop outs and non-completers (approx. 25 % of a cohort).
- ✧ Youth unemployment in Sweden is paramount among the Nordic countries – around 25 % of the 20-24 year olds.
- ✧ To develop more efficient transitions from school-based VET to work life and higher education

## *Finnish VET – incorporation of work-related learning into VET curriculum in the 2000s*

- ✧ Prior to the turn of the millennium the Finnish initial (upper secondary) VET was mainly organised by vocational schools with few links between education and working life.
- ✧ Since 2000 work-related learning (on-the-job learning) came as a part of all Finnish vocational qualifications and in 2006 vocational skills demonstrations were incorporated into the VET curriculum.
- ✧ Skills demonstrations bring together workplace representatives and teachers. The assessment is arranged in collaboration with school, employers and employees representatives aiming to formative assessment.
- ✧ All initial vocational qualifications were extended to consist of 120 credits (3 years of full time study) including *on-the-job learning (at least 20 credits) and gives eligibility for HE.*

# Immediate continuation of studies in upper secondary education in 2000 – 2012 in Finland (Statistics Finland, 2014)



## *Increased participation in the Finnish VET in the 2000s*

- ✧ The popularity of vocational education and training has increased since the early 2000s.
- ✧ The year of 2009 was the first year when the majority of applicants listed a VET programme as their primary choice.
- ✧ After basic education a half of the youth continue in general upper secondary schools (50%), and 41% in initial vocational education and training. A total of 9 % did not continue any studies leading to a qualification or degree, whereas an EU average of 13% in 2012.

## Reasons for popularity of VET in Finland (Stenström & Virolainen, 2014)

- ✧ Vocational education and training has been developed *towards the world of work*.
- ✧ There has been *several campaigns* organised by the Ministry of Education and Culture and social partners to improve the image of vocational education.
- ✧ *Skills competitions*, like The Finnish National Skills Competition “Taitaja” organized yearly, have increased popularity
- ✧ A vocational qualification gives *general eligibility for higher education studies*.
- ✧ Establishment of Universities of Applied Sciences
- ✧ Internationalisation of VET

## Towards the Finnish school-based VET

- ✧ The systemic change which has improved the VET's status are reforms of curriculum and qualification structure as well as those relating to eligibility to higher education.
- ✧ Three developmental trends have had a crucial impact on the current status of the Finnish VET.
  - First, the *general education component* within VET was developed along with continuous pedagogical renewal. From the early stage of the Finnish VET the curriculum of vocational education has included both theoretical and vocationally oriented theoretical subjects, and practical studies. This has created a basis for participation in higher and further education as well as for life-long learning.



## Towards the Finnish school-based VET (Contd.)

- Second, higher and further education opportunities have also been created from VET. The *establishment of the Finnish polytechnics* (universities of applied sciences) has enabled the removal of dead-ends, has increased the prestige of VET and safeguard the route to higher education, which makes the Finnish VET different from VET systems in many other European countries.
- Third, the *practical studies (work-based learning and vocational skills demonstrations)* have been an important component of the vocational education training, although the Finnish VET is school-based.



## *Current challenges of the Finnish VET*

- ✧ Although the attraction of vocational education and training has been steadily growing, there are some challenges to develop the Finnish vocational education and training.
- ✧ On one hand the dropping out creates a challenge. On the other hand, the increased popularity of VET along with the changing working life and competence requirements create new demands on VET.
- ✧ There is a need to develop the VET system to be more responsive to heterogeneous student population, in order to meet both the needs of those aiming to participate in Skills Competitions and those under the threat of dropping out.

## VET curriculum reform – outcome-based approach

- ✧ The curriculum of the Finnish VET started to reform again in 2015. The reform will come into effect in 2018.
- ✧ It bases on *outcomes-based approach* that has been enhanced in European discussions since 2009. Vocational skills requirements in the curriculum were defined as learning outcomes (knowledge, skills and competences).
- ✧ The new curriculum reform reflects the need to harmonise the Finnish VET with the European Qualification Framework (EQF) and European credit system for VET (ECVET).
- ✧ The European Credit System for Vocational Education and Training (ECVET) is expected to facilitate the recognition of prior learning and existing competences.

# Features of the Nordic VET systems

Similarities/ differences	Denmark	Norway	Finland	Sweden
<b>School-/work-based learning</b>	Main route: Work-based learning apprenticeship, Vocational gymnasium, EUX- system 'hybrid system'	Main route: 2+2 both school- and work-based learning (mixed) Apprenticeship	Main route: School-based learning including work- based period 'hybrid system' Minor route: apprenticeship (mainly for adults)	Main route: School-based learning (gymnasieskola) Apprenticeship
<b>Links with employers</b>	Strong links; apprenticeship	Improving links with employers	Improving links with employers	Weak links with employers
<b>Links with HE</b>	Weak connection, dead end	Temporary basis	Eligibility to HE	Eligibility to HE, but not automatic

## How have the Nordic VET systems met the recent challenges?

Improve access to higher education	Integrate vocational and general learning in VET	Improve access to labour market
Denmark: eux, <i>hybrid system</i>	Norway: 2+2 system, <i>hybrid programmes</i>	Finland: on-the-job learning and skills demonstrataions, <i>hybrid system</i> Sweden: apprenticeship system, <i>hybrid system</i>

> *There seems to be a trend towards a hybrid system in all Nordic countries.*

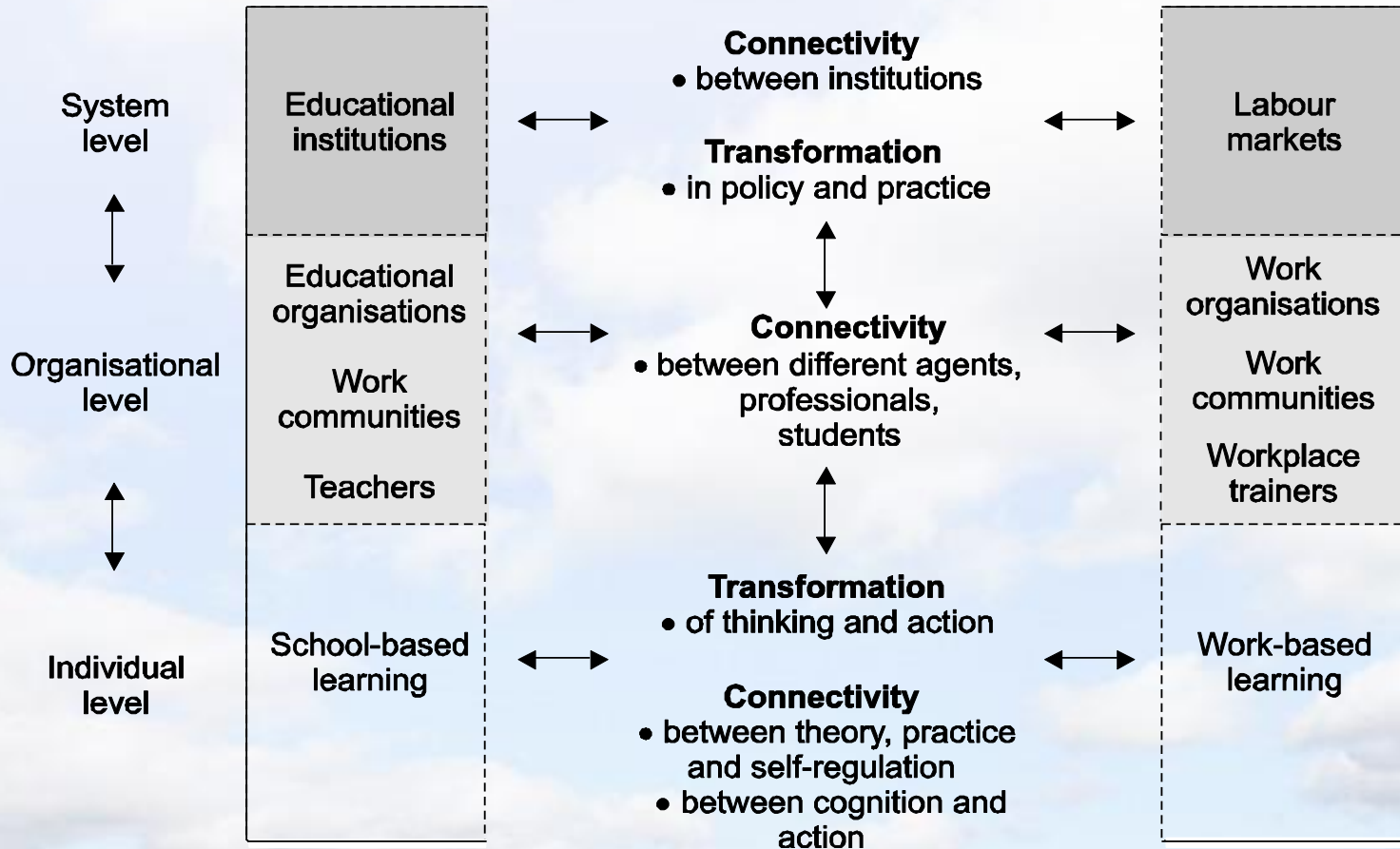
# Collaboration between education and work

- The key question regarding collaboration between education and work is how to build a firm connection between
  - theory and practice,
  - conceptual and everyday knowledge,
  - abstract thinking and practical action,
  - between the development of generic skills and specific vocational skills.

Connective learning situations involving individuals, work communities, organisations and institutions constitute learning spaces which open up opportunities for transformations of various kinds (Stenström & Tynjälä, 2009).



# Levels of Connectivity (Stenström & Tynjälä, 2009)



# *What kind of VET is needed in the future? What kind of skilled workers are needed in the future work?*

- ✧ What kind of skills, knowledge and competence are needed in the future?
- ✧ How are skills developed?
- ✧ What kind of environments are needed for skill formation?
- ✧ The role of educational institutions in skill formation?

## *Trends across sectors and drivers of change (Cedefop 2016)*

- ✧ Job growth across the EU is expected to be concentrated in business services, which by 2025, are expected to account for 30% of all jobs in the EU.
- ✧ Employment will continue to fall in the primary sector and manufacturing but employment trends vary within sectors. Job growth in education and health and social services
- ✧ Increasing need for high qualifications. All sectors are expected to employ more highly qualified people.



## *Impact on education and training needs (Cedefop 2016)*

- ✧ To support the workforce education and training need to ensure:
  - a balanced mix of skills across sectors and qualification levels
  - broader skill profiles across occupations and qualifications, e.g. combining technical and behavioural skills
  - acquisition of new specialised and technical skills.

# Literature

- ✧ Cedefop. (2014). On the way to 2020. data for vocational education and training policies. Country statistical overviews. Update 2013.
- ✧ Cedefop. (2016). European sectoral trends. The next decade.
- ✧ Country reports of Denmark, Finland, Norway and Sweden of the Nord-VET project. Available from the <http://nord-vet.dk/country-reports/>

*Thank you for your attention!*

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