



Experiences from the European e-Competence Framework

NQF - SQF, 18th February 2011 Sliema, Malta



Sticky but very fulfilling





Gerald's Questions – Gasp !

- How did it come about
 - What was the problem?

- What methods & principles were adopted?

- In what context did it develop?
 - Sustainability

- What were the major learning points?



A common European ICT competence currency


■ A Europe-wide working tool for:

- **ICT practitioners and managers** with clear guidelines for their competence development
- **HR managers** with inputs to anticipate, plan and develop competence needs
- **Higher Education, Vocational Training and Certification Providers**, enabling effective planning and design of ICT curricula
- **Policy makers and market research**, providing a common European ICT competence language

Ability to develop, manage and plan ICT practitioner and manager competences required for the long term perspective across Europe



e-CF a Competence Framework Overview

- Completed and published in 2008: the result of two-years activity from e-Skills multi stakeholders, ICT and human resource experts' work
- Revised 2010 to create version 2
- A common European reference for ICT Professionals
 - 36 ICT practitioner and manager competences in 5 e-Competence areas
 - Competences defined at 5 e-Competence proficiency levels, related to the EQF (European Qualifications Framework) levels 3-8
- For: ICT user and supply companies, the public sector, educational and social partners across Europe
- An enabler for interoperability in ICT career development in EU, e.g. between frameworks, qualifications, certifications, competence demand etc.
 - Supported by the European Commission and the Council of Ministers 
- Framework development context: CEN / ISSS workshop on ICT skills



Building the e-CF

a combination of sound methodology and expert contribution





I'm sure I'm a C++, Ai+ , Ac+





Framework underpinning methodology

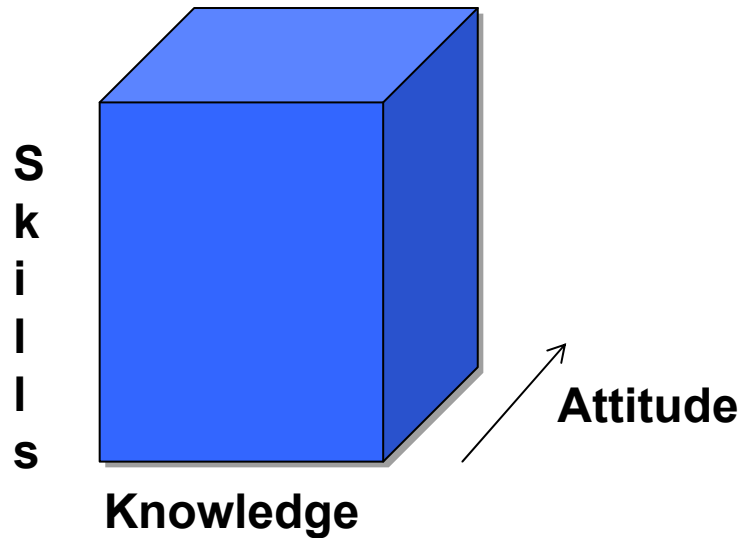
Based on a shared understanding of competence

Competence: *a demonstrated ability to apply knowledge, skills and attitudes for achieving observable results*

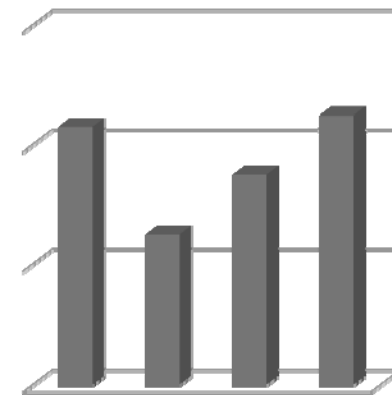
Dimension 1: 5 e-CF areas
Dimension 2: 32 competences

Dimension 3: 5 e-CF levels
Dimension 4: knowledge & skills

Competence from a workplace perspective



Competence sizes
e1- e5



Spikey Profile

e-CF 1.0 overview

5 e-Comp. areas (A – E)	32 e-Competences identified	e-Competence proficiency levels e-1 to e-5, related to EQF levels 3-8				
		e-CF levels identified per competence				
		e-1	e-2	e-3	e-4	e-5
A. PLAN	A.1. IS and Business Strategy Alignment					
	A.2. Service Level Management					
	A.3. Business Plan Development					
	A.4. Specification Creation					
	A.5. Systems Architecture					
	A.6. Application Design					
	A.7. Technology Watching					
B. BUILD	B.1. Design and Development					
	B.2. Systems Integration					
	B.3. Testing					
	B.4. Solution Deployment					
	B.5. Technical Publications Development					
C. RUN	C.1. User Support					
	C.2. Change Support					
	C.3. Service Delivery					
	C.4. Problem Management					
D. ENABLE	D.1. Information Security Strategy Development					
	D.2. ICT Quality Strategy Development					
	D.3. Education and Training Provision					
	D.4. Purchasing					
	D.5. Sales Proposal Development					
	D.6. Channel Management					
	D.7. Sales Management					
	D.8. Contract Management					
E. MANAGE	E.1. Forecast Development					
	E.2. Project and Portfolio Management					
	E.3. Risk Management					
	E.4. Relationship Management					
	E.5. Process Improvement					
	E.6. ICT Quality Management					
	E.7. Business Change Management					
	E.8. Information Security Management					



e-Competence examples

Dimension 1
e-Competence area

A. PLAN

Dimension 2
A.1. IS and Business Strategy Alignment

e-Competences: Title + generic description
Anticipates long term business requirements and determines the Information System model in line with organisation policy. Makes strategic ICT policy decisions for the enterprise (ERP, CRM, Groupware, Network etc.).

Dimension 3	Level 1	Level 2	Level 3	Level 4	Level 5
e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)	—	—	—	—	Provides strategic leadership to reach consensus and commitment from the leadership management team for the construction and implementation of long term innovative solutions.

Dimension 4
Knowledge (k) and skills (s) examples

s1. analyses business processes and architectures
s2. determines requirements for processes related to ICT Services
s3. identifies, analyses and defines user/customer needs
s4.

k1. knows ERP system potential and opportunities
k2.

Dimension 1
e-Competence area

B. BUILD

Dimension 2
B.1. Design and Development

e-Competences: Title + generic description
Designs and engineers software programs/modules and/or hardware components to meet required specifications. Follows a systematic methodology to analyse and build the required components and interfaces. Performs unit and system testing to ensure functional and performance criteria are met.

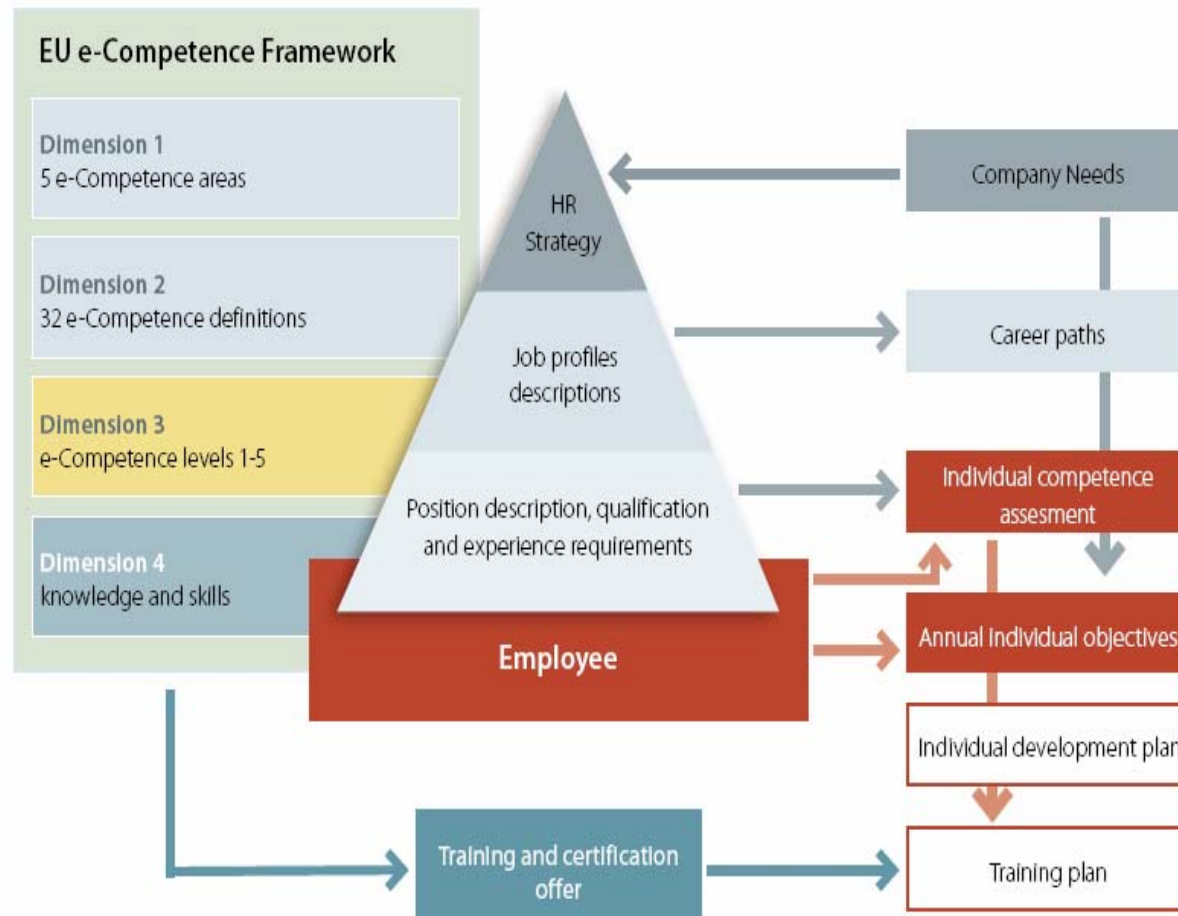
Dimension 3	Level 1	Level 2	Level 3	Level 4	Level 5
e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)	—	Systematically develops small components or modules.	Acts creatively to develop and integrate components into a larger product.	Handles complexity by developing standard procedures and architectures in support of cohesive product development.	Has ultimate responsibility for strategic direction of product, technical architecture or technology development.

Dimension 4
Knowledge (k) and skills (s) examples

s1. ...
k1.

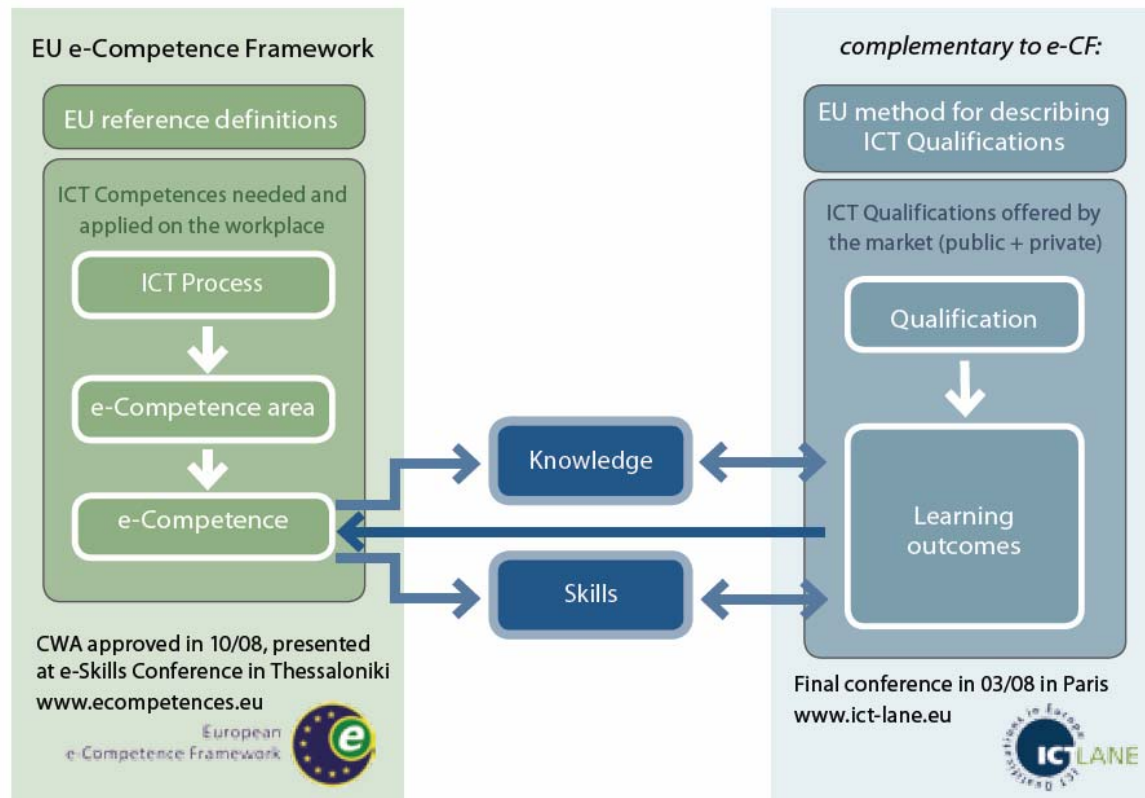


e.g. (1) e-CF 4 dimensions' use in companies/ ICT organisations





e.g. (2) Addressing competence demand and qualification supply



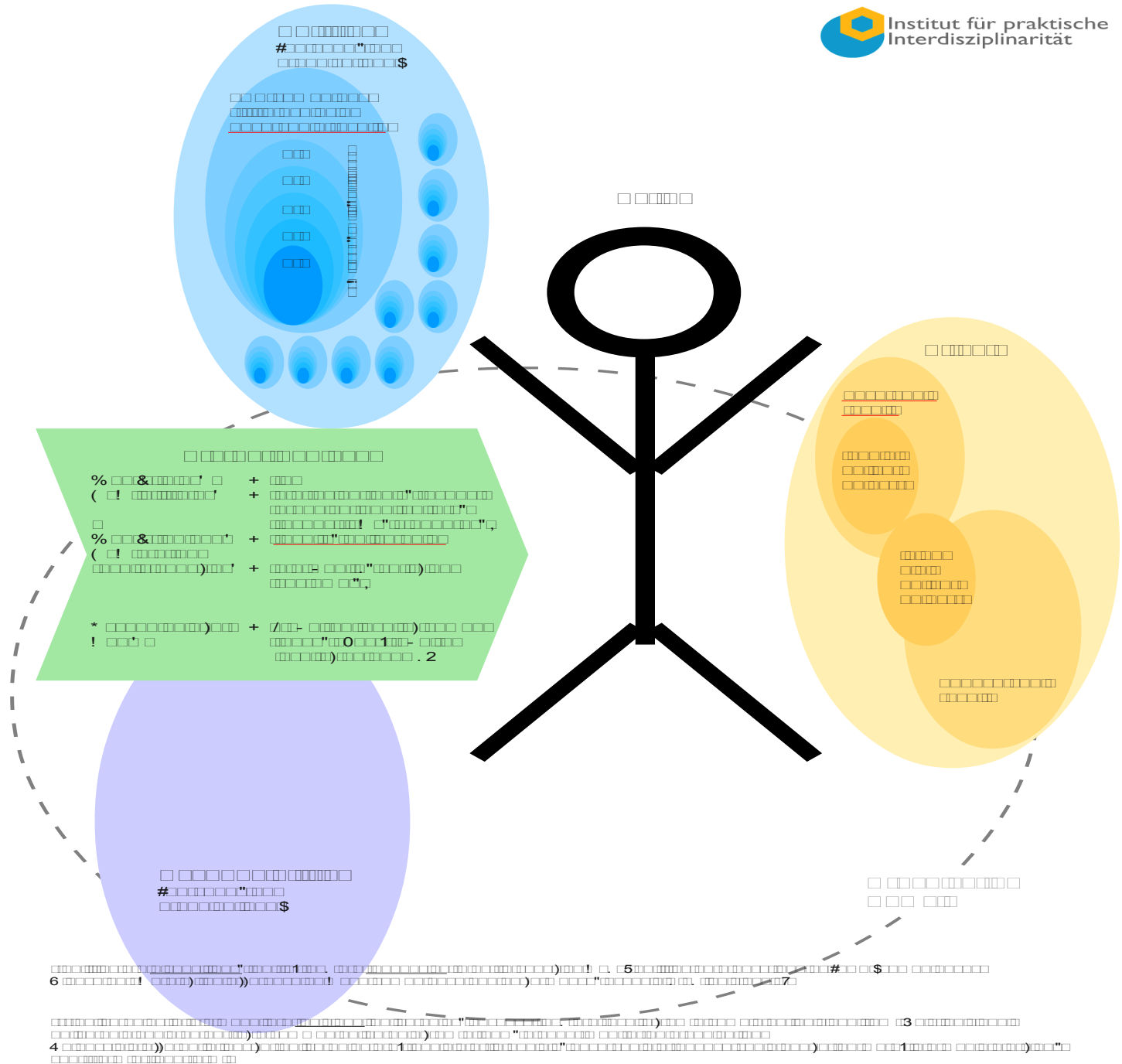
e-CF levels

- 5 e-Competence levels related to the EQF

e-CF Level	related to EQF Level
e-5	8
e-4	7
e-3	6
e-2	4 and 5
e-1	3

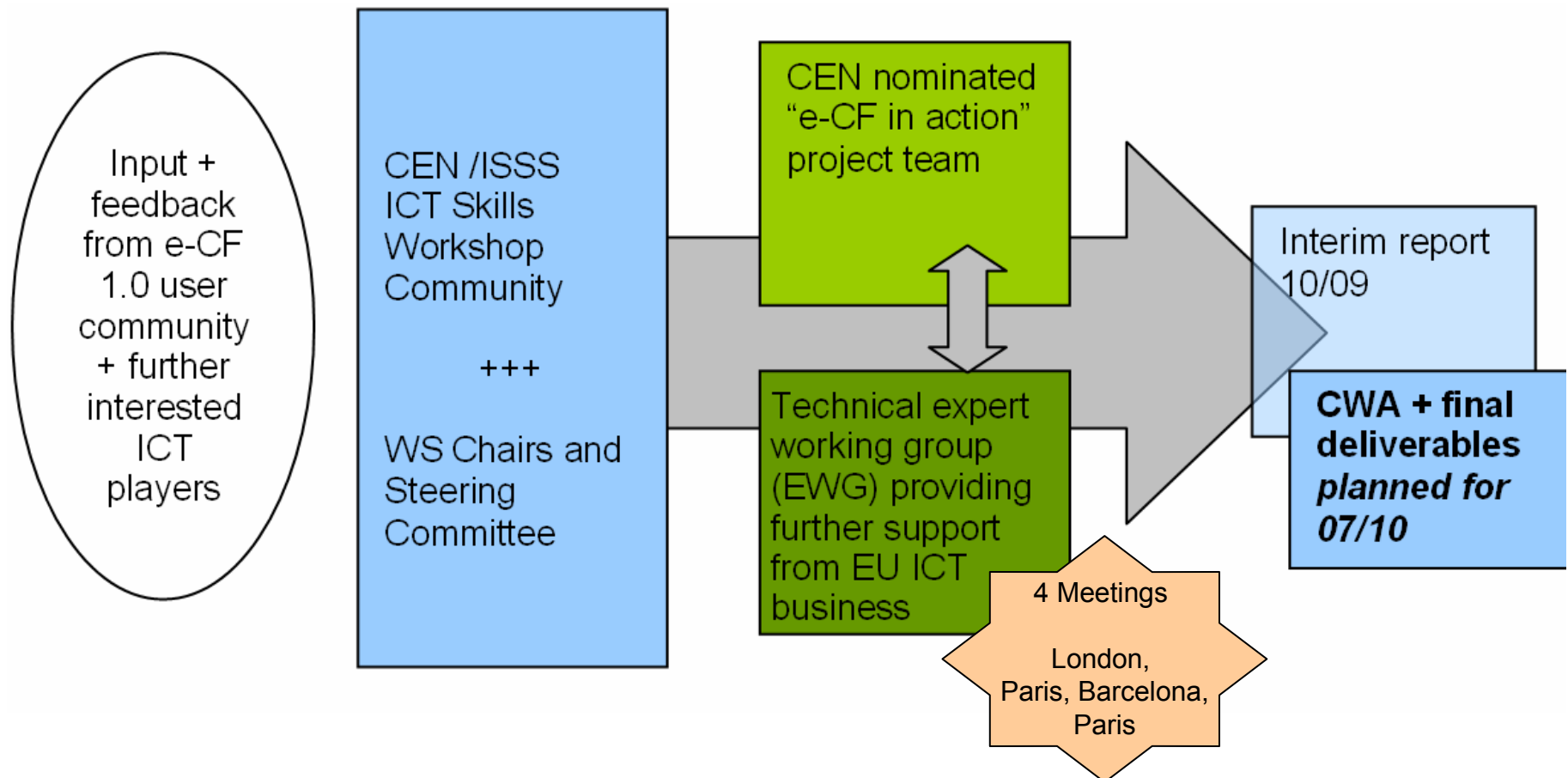
- Criteria

e-CF Levels	Complexity	Autonomy	Typical Tasks	Behaviour	e-CF Levels descriptions
e-5	Unpredictable unstructured	Demonstrates substantial leadership and independence in context...	IS strategy or programme management	Conceiving, transforming, innovating	Principal
↑	↑	↑	↑	↑	↑
e-1	Structured - predictable	Demonstrates limited where contexts are generally stable...	Support Service	Applying, adapting, ...	Associate





The CEN nominated expert team & working structure





To summarise again, e-CF is:

- A competence framework focused upon e-competences as required and applied in the workplace (It is not a qualifications framework.)
- A European ICT competence benchmark from an employers perspective
- A bridge and a shorthand, “ICT Competence currency” increasing transparency and mobility in the European labour market

... Which can be used

- In many ways, depending on ICT sector players‘ perspective
- With user guidelines for framework application - providing hints and ideas



International application examples

- France: e-CF use for an updated CIGREF Job profile „référentiel“ + ICT company: reference e-CF to Cobit processes, internal use of the e-CF envisaged
- Germany: Translation e-CF into German and referencing ICT job profiles to e-competences + e-CF test use in a German SME with 300 employees around Europe + e-CF, EQF, NQF, AITTS: Series of publications just published
- Italy/ Fondazione Politecnico: Using the framework as reference for a survey on Green e-competences required by ICT vendors, data centres and end-user companies
- Québec/ Ville Montréal: Translation e-CF for internal use into French + Using the e-CF as reference for an internal competence analysis in ICT department (400 professionals)
- Malta: Using the e-CF as reference for empowering the national e-Skills strategy
- EXIN International: Intending a „reference card“, relating certifications to e-competences
- Airbus: Using dimension 2 and 3 descriptions for competence catalogue update
- Various EU level applications related to qualifications, certifications, interoperability (CEN)



e-CF new graphics and [navigation tool](#)

	Scroll to section ▾	Open section ▾	Close section ▾	Open dimension ▾	Close dimension ▾
▼ A. PLAN					
▶ A.1. IS and Business Strategy Alignment		Plan		<input type="checkbox"/>	<input type="checkbox"/>
▶ A.2. Service Level Management		Build		<input type="checkbox"/>	<input type="checkbox"/>
▶ A.3. Business Plan Development		Run		<input type="checkbox"/>	<input type="checkbox"/>
▶ A.4. Specification Creation		Enable		<input type="checkbox"/>	<input type="checkbox"/>
		Manage		<input type="checkbox"/>	<input type="checkbox"/>
		All sections		<input type="checkbox"/>	<input type="checkbox"/>
▼ B. BUILD					
▶ B.1. Design and Development				<input type="checkbox"/>	<input type="checkbox"/>
▶ B.2. Systems Integration				<input type="checkbox"/>	<input type="checkbox"/>
▶ B.3. Testing				<input type="checkbox"/>	<input type="checkbox"/>
▶ B.4. Solution Deployment				<input type="checkbox"/>	<input type="checkbox"/>
▼ C. RUN					
▶ C.1. User Support				<input type="checkbox"/>	<input type="checkbox"/>
▶ C.2. Change Support				<input type="checkbox"/>	<input type="checkbox"/>
▶ C.3. Service Delivery				<input type="checkbox"/>	<input type="checkbox"/>
▶ C.4. Problem Management				<input type="checkbox"/>	<input type="checkbox"/>
▼ D. ENABLE					
▶ D.1. Information Security Strategy Development				<input type="checkbox"/>	<input type="checkbox"/>





Lessons Learnt

- Combination of Science and Art
- Apply a focused perspective
 - Who and what is it for ?
- What is the dominant viewpoint ?
- Gain sponsorship
- Be consistent with granularity
- Engage stakeholders
- You can't please all of the people all of the time



European e-Competence Framework Website: www.ecompetences.eu

Digital Publications:

- Executive Overview
- User Guide
- Methodological Guidance

Terry Hook

terry.hook@clock-it-skills.co.uk