CCM
CERN COMPETENCY MODEL

Marie-Laure Rivier, 24-25 February 2014

presented by Sudeshna Datta Cockerill

The CERN Competency Model (CCM)

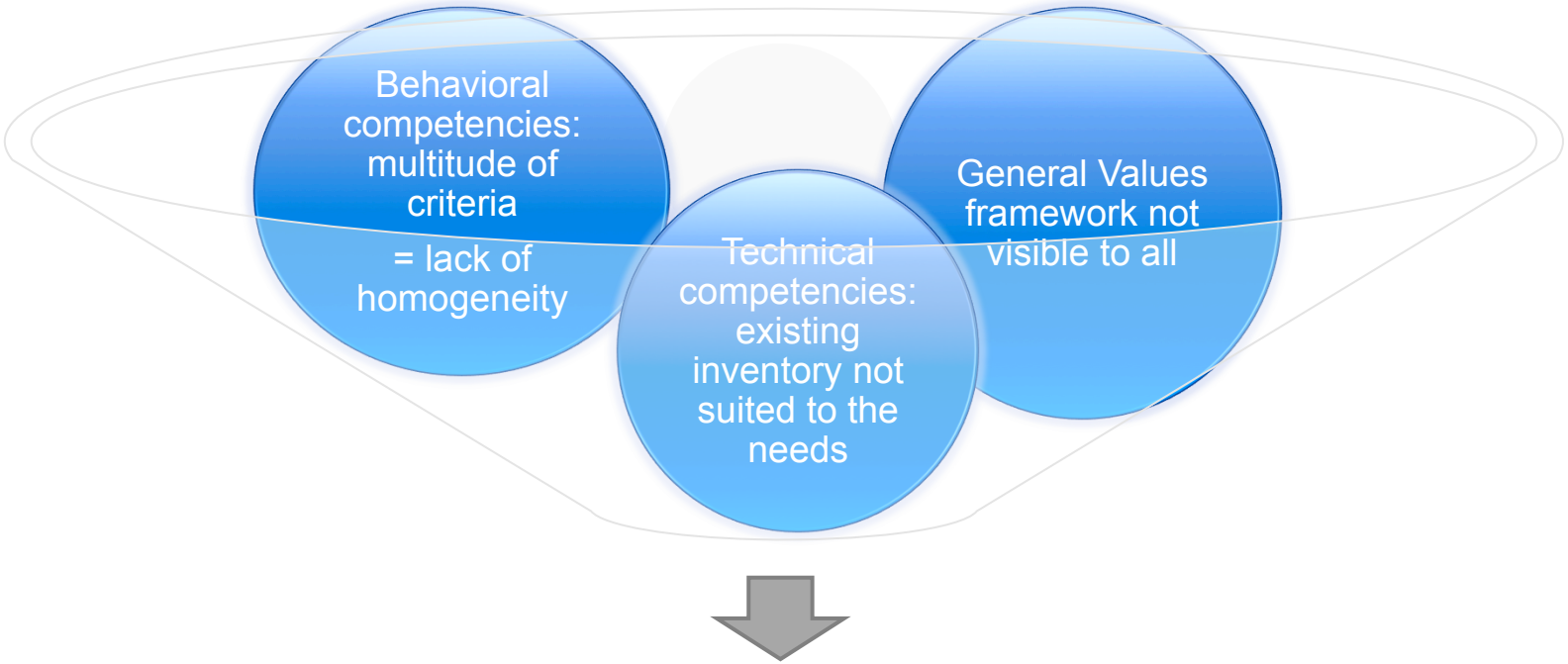
- Background
- Historical perspective
- Definitions
- Behavioural competencies
- Technical competencies
- Implementation
- Summary
- Future Challenge: updating the CCM

What is a competency?

Take 5 minutes with the person next to you and discuss

Background

Findings:



Decision/action:

Adopt a transparent approach: top-down and bottom-up involving all stakeholders and sponsored by the Director General

Historical perspective

2004	• Inventory of the technical competencies 'STI' (Skills and Talents Inventory)
2008	• Starting work on behavioural competencies in addition to the STI inventory
2009	• Work on the core Values of the Organisation • Continuation of work on the behavioural competencies (150 people)
2010	• Publication of the Code of Conduct (01.07.2010) • Work on technical competencies
2011	• Publication of the CERN Competency Model (CCM): combining technical and behavioural competencies around CERN Values • Use of the CCM in the recruitment processes
2012	• Use of the CCM in performance management (annual appraisal interviews: 'MARS') • Alignment of the Training catalogue: programmes are based on the CCM
Next steps	• Talent Management • Capacity planning • Promotions

Definitions

- The Competency Model: ‘a reference document with the main aim of developing consistency and coherence across organizational HR-related processes.’

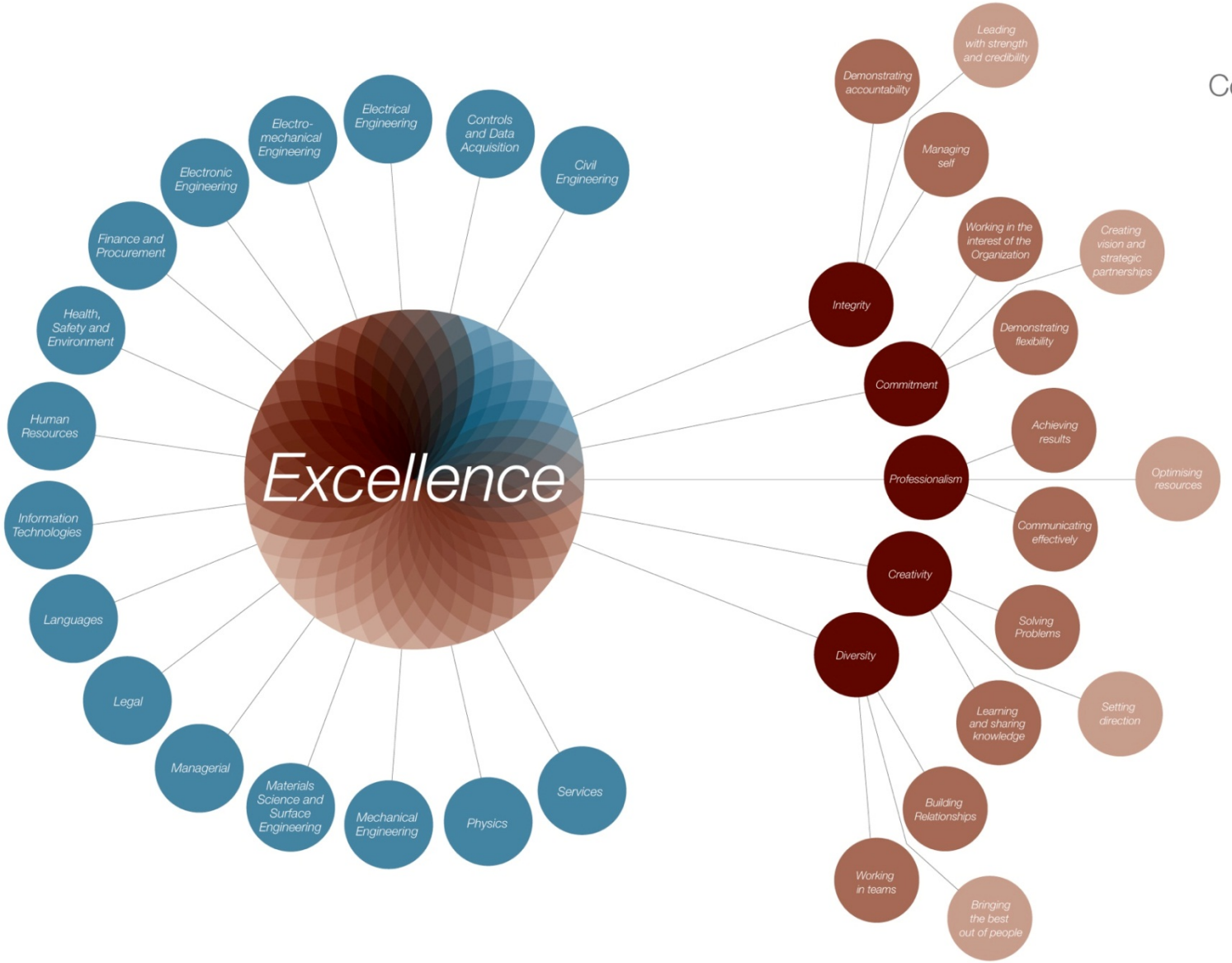
- CERN competencies: ’Competencies are skills, knowledge and behaviors that individuals demonstrate when carrying out job relevant tasks within our organization.’

- The CERN Competency Model is directly related to the CERN core Values:
  - List of technical competencies by domains of expertise corresponding to CERN needs.
  - Behavioural competencies= core competencies applicable to all staff members and leadership competencies where applicable.

CERN Values


Excellence
Integrity
Commitment
Professionalism
Creativity
Diversity

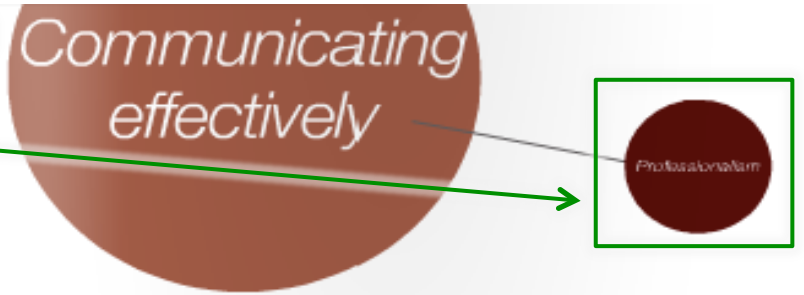
CERN Competency Model



Behavioural competencies

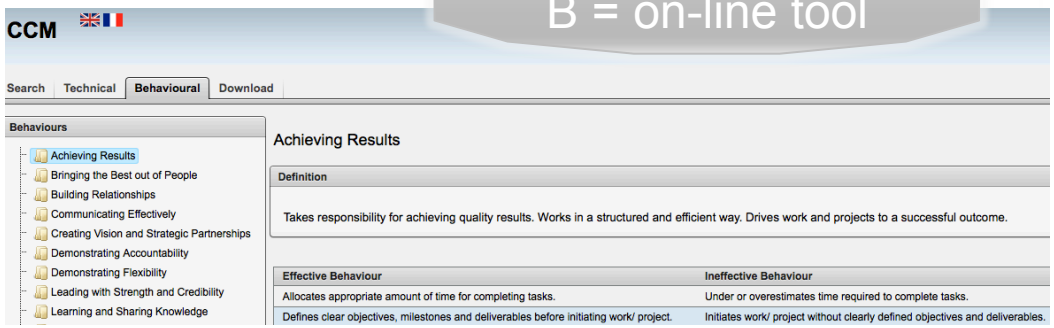
- Corresponding Value
- Competency definition
- List of effective and ineffective behaviours

A = brochure



- Demonstrates an ability to express and explain ideas in a convincing manner.
- Practises attentive listening and actively promotes mutual understanding.
- Makes effective oral presentations.
- Negotiates effectively.

B = on-line tool



Effective Behaviours

- Listens actively to others and lets others speak.
- Expresses opinions, ideas and suggestions with conviction and in a logical/structured manner; keeps to the point.
- Demonstrates a pro-active approach to resolving differences; addresses issues of conflict constructively.
- Selects the appropriate medium and forum to communicate.
- Delivers presentations in a structured and clear way; adjusts style and content to the audience. Responds calmly and confidently to questions.
- Leverages support networks across the Organization.

Ineffective Behaviours

- Interrupts or is argumentative.
- Lacks conviction when presenting issues; strays off the point when speaking, talks about irrelevant issues.
- Rejects or disregards the viewpoints of others; provokes confrontation indiscriminately; allows conflict to escalate without taking action.
- Fails to check if information is understood.
- Communicates mainly in a single mode – written, oral or e-mail.
- Delivers presentations without a clear structure and conclusions; misjudges level and/or fails to adapt style to target audience; shows nervousness and a lack of confidence when speaking in public.

The Soup

Collaborate

- Effective communication skills, and the ability to collaborate and share information effici
- Prov ational and
- The eam.

Autonomy

- Autonomy, flexibility, openness and a sense of responsibility.
- An autonomous mindset with good organization skills.
- An autonomous mindset, coupled with a strong team player attitude in an international context.
- An a ise judgr
- An a ment, in collaboration with several groups inside and outside the Organization.
- An autonomous approach to work, with a proven ability to work as part of a team.

Working in Teams

Effectively collaborates within multi-disciplinary and international teams

Managing Self

Works well autonomously; takes on activities and tasks without prompting.

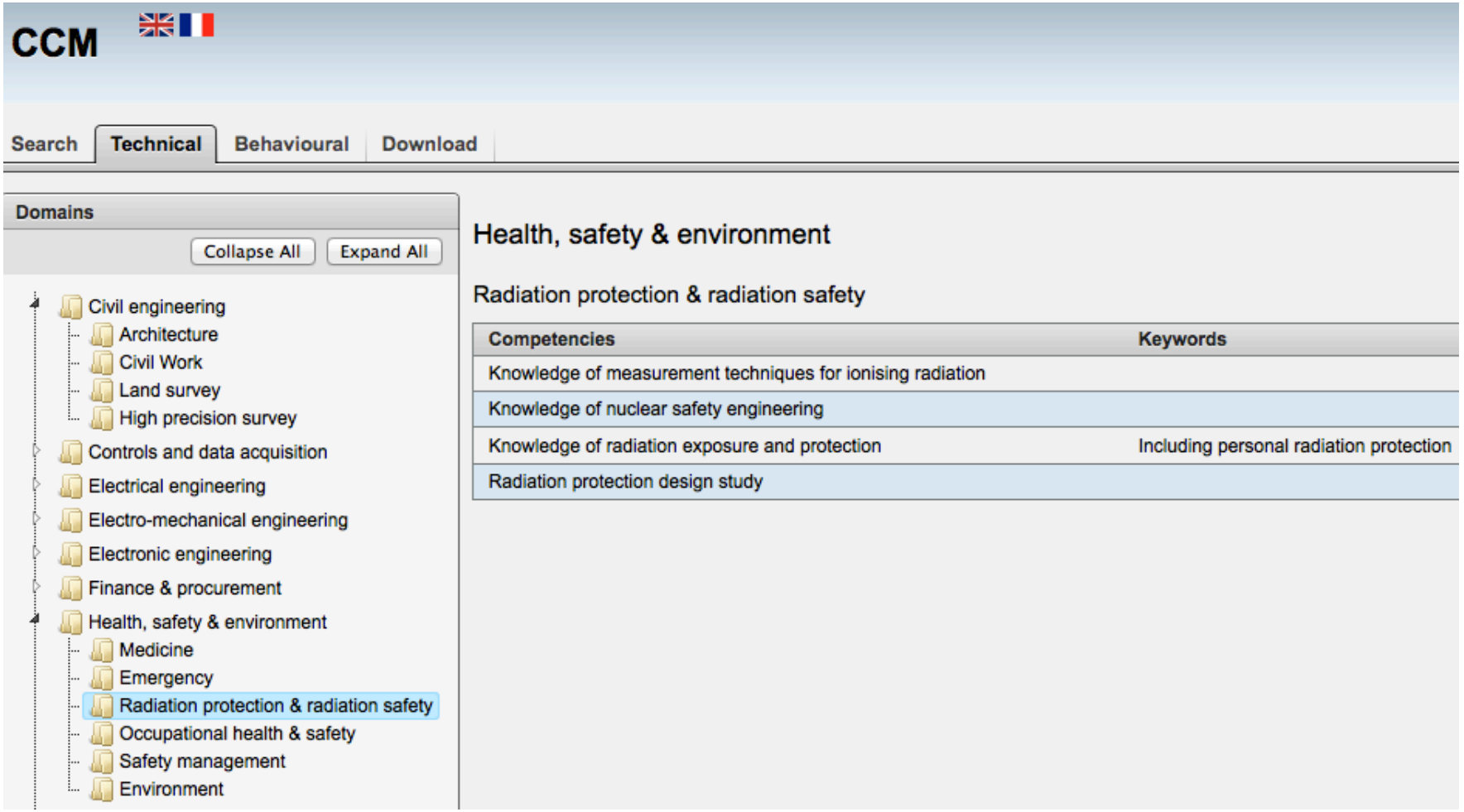
Technical competencies

Starting point	• Pre-existing system (STI) unsuitable • Decision to start a new inventory from scratch and to draw up a list of all the competencies that are necessary to the fulfillment of the Organisation's mission
Composition of the working group	• Project leader (HR) • 12 Departmental representatives • 2 representatives of the HR department • 2 representatives of the Staff Association
Mandate	• Make a proposal to the HR department
Meetings	• Every 2 weeks during the February-December 2010 period
Division of tasks	• By departmental representatives (this should be done in relation to the technical domains and not organic units)

= 16 domains
= Approximately 400 competencies

- Civil engineering
- Controls and data acquisition
- Electrical engineering
- Electromechanical engineering
- Electronic engineering
- Finance and procurement
- Health, safety and environment
- Human resources
- Information technologies
- Languages
- Legal
- Managerial
- Materials science and surface engineering
- Mechanical engineering
- Physics
- Services

The on-line portal:



Implementation of the CCM

In HR processes:

Effective implementation		Future potential implementation
Process	**Area(s) of implementation**	**Process**
Internal and external recruitment	Integration in the vacancy notices and the assessment of the candidates	*Promotions*
Performance appraisal	Demonstration of competencies in the achievement of work objectives during a period of reference and in the setting of development objectives for the next exercise (example: objective = leading mechanical studies; technical competency = design of mechanical systems)	*Capacity planning*
Learning and development	Competencies are mapped with corresponding training programmes	*Talent management and mobility*

Example: a vacancy notice for the external recruitment of an Electrical Engineer

Experience and competencies

The experience required for this post is:

- Experience in the design and management of high-voltage power networks for a large industrial site and in the operation and maintenance of power networks.
- Project management skills, including team management, financial management, work planning and priority setting.
- Experience in the design and management of low-voltage power networks would be an asset.

The technical competencies required for this post are:

- Design of HV network & substations.
- Commissioning, maintenance & operation of electrical distribution systems.
- Design of LV network & switchboard: would be an asset.

The behavioural competencies you will need to demonstrate for this post are:

- Solving problems: Identifying, defining and assessing problems, taking action to address them; Anticipating obstacles; assessing alternative solutions in order to have a fall-back plan.
- Setting direction: Explaining and implementing change in such a way that team members see the benefits for themselves and for CERN.
- Working in teams: Building and maintaining constructive and effective work relationships; Gaining trust and collaboration from others.
- Achieving results: Defining clear objectives, milestones and deliverables before initiating work/ project; Driving work / projects along and seeing them through to their conclusion.

CBI: competency based interviewing training

Looking for competencies evidence, not falling in the traps:

First impressions, Personal biases and assumptions

The interviewer only looks for facts to back up initial impressions (**'Halo'** and **'Horn'** effect)

What is the horns effect and halo effect? It is a cognitive bias that causes you to allow one trait, either good (halo) or bad (horns), to overshadow other traits, behaviors, actions, or beliefs

Mini-me syndrome

'I like this guy. He reminds me of someone I know……..'

'She went to the same college as me…….'

CBI: competency based interviewing training

- Competency-based interviews look for **evidence that the candidate has the most relevant competencies** required for the job

- Identify a key competency to evaluate
- ►Ask for an example of when the person had to use that competency
- –«Give me an example where you had to work with someone who was less cooperative than you needed him/her to be. Describe the situation and how you handled it?»
- ►Follow-up and probe for specifics
- –«Tell me more about……»
- –«Exactly how did you reach that conclusion?»
- ►Clarify understanding
- –«So if I understand you correctly……»
- ►Ask about the outcome and results
- –«What was the outcome of your actions?»

Example: performance appraisal report

a) Work objectives

1 Expected Results* :

Status* :

Results Obtained* : (including actions taken and specific circumstances) :

Behavioural and/or technical competency.*
If the status is "Achieved or partially achieved" please enter at least one competency, otherwise it is optional.

Respective main behavioural competency :

Respective main technical competency : :

Result(s) of objectives added since last interview (where applicable)

b) Objectives as supervisor (where applicable)

1 Expected Results* :

Status* :

Results Obtained* : (including actions taken and specific circumstances) :

Behavioural and/or technical competency.*
If the status is "Achieved or partially achieved" please enter at least one competency, otherwise it is optional.

Main behavioural competency demonstrated :

Main technical competency demonstrated : :

c) Development objectives (see Training list in HRT)

Expected Results

Main Competency (technical or behavioural) to be developed

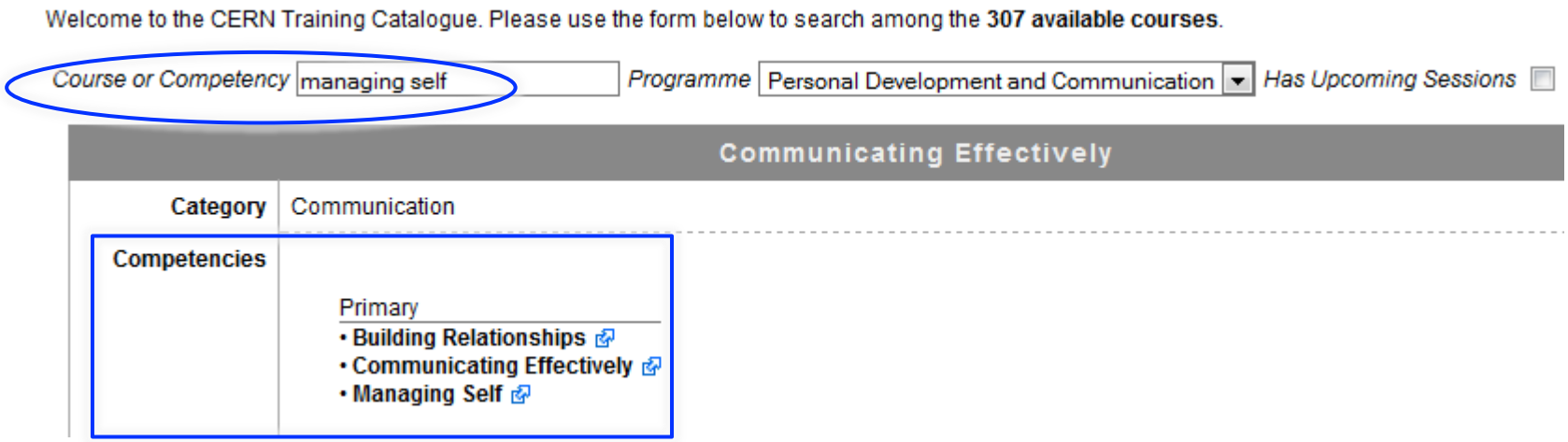
Activity proposed

Results Obtained* : (including actions taken and specific circumstances)

1

Status* :

Example: the Training catalogue



Change Management: set in place a vast training program (2011 – 2012)

- Basics (half day): ‘CCM – understand and work with the competencies’.
- Training for people involved in the interviews (half day): CBI (‘competency based interviewing’; interviews based on the competencies).
- Training for supervisors in order to prepare the annual performance interviews (1 day): training on management tools and introduction of the annual interview form suited to the Competency Model.
- Training for staff members in order to prepare the annual appraisals (3 hours).

Summary

What lessons can be learned from the CCM implementation?

- The paying holistic approach: acceptance of the values through the Code of Conduct which reflect the Organisation's culture.
- Implementation challenges

  -> Cultural aspects :
  - Highlighting the development areas appears sometimes difficult.
  - 80/20 rule: difficulty with the idea of not covering all competencies that exist in the Organisation, at an individual level.

- Benefits:
  - Harmonization of processes.
  - Inventory of the competencies allows to a better identification of the necessary knowledge & skills for the success of the Organisation.
  - A reference framework and a common language to use during performance discussions. The sample indicators supporting each competency help understand what are the types of behaviours that are valued by the Organisation.

Future challenge: updating the CMM

What is CCM UPDATE/MAINTENANCE?

It is about having a mechanism to periodically update the CCM reference lists

The purpose of the maintenance is to keep up with the evolution of competencies in line with CERN's strategic orientations and evolution/benchmarks in the different Domains.

Why do we need a maintenance mechanism

To ensure the CCM remains as evolutive as possible, yet recognizing the impact of the changes

Agreeing on a maintenance mechanism is key to keeping the CCM alive and up-to-date. This responsibility should be shared between HR Management and Departments' Management.

How will the maintenance be done?

Department will be responsible for the final contents; HR will facilitate the process

Frequent concerns

Why don't we have the same granularity everywhere?

- With 16 Domains at CERN varying from HR to Electrical Engineering, does it make sense?
- Level of granularity depends on application: what is needed for Recruitment? What is needed for Mobility? Etc…
- Same 3 level structure

We have too many Technical Competencies, or too few …

- There is no rule, the same principles as above apply: it depends on what we want to do with it.
- The intent is to cover 80% of needs

HR does not understand our work, why is HR managing the project?

- CCM is the keystone to HR processes, including capacity planning
- HR is facilitating discussions, but does not own the content

A CCM, what for?

- This one is not debated anymore…
- Not abstract anymore, Staff understand its HR applications

Why don't we have a definition for each competency?

Would be great – but do we want to invest the time and resources?

SPARE

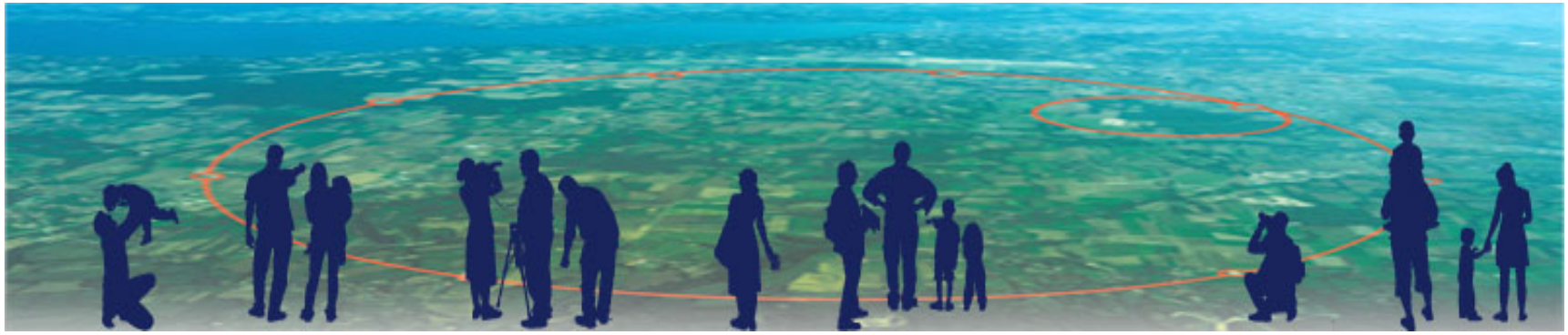
- Diversity-to-TREF_October 2013


CERN

Diversity @ CERN

TREF – 21st November 2013

Sudeshna Datta-Cockerill



CERN Diversity Programme – Report to TREF

- Strategic Objectives 2012 – 2014
  - On-going actions across axes of recruitment, career development and work environment
- Gender Awareness and Outreach
- Concluding Remarks

Strategic Objectives - Recruitment

#1: Improve distribution of under-represented nationalities

- Multiple actions & outreach activities carried out in Member States to promote CERN student & employment programmes
- Special agreements initiated by individual under-represented Member States to fund student positions at CERN
- Use of social media – means to attract diverse applicant pool & promote CERN's attractiveness as an employer
- Regular monitoring of recruitment actions

The longer term aim is to create a talent pipeline that could eventually lead to an increase in the distribution of under-represented nationalities

Strategic Objectives - Recruitment

#2: Achieve gender distribution in recruitment for all professional categories

- **Pro-active measures – focused on sourcing & pre-selection stages**
  - Advertising a diversity policy – encouraging women to apply
  - Social media & outreach actions – attract women in STEM roles
  - Ensuring selection of qualified women – long and short lists
  - Assuring gender diversity & training of selection board members
  - Adopting competency based interview practice – no bias
  - Evaluating & selecting – objective, non-discriminatory criteria

Staff Members	Res Phys	Appl Phys	Computing	Engineer	Technician	Crafts	Prof Admin	Adm Assist	Adm Clerk	TOTAL
% W 1995	2.88	2.9	11.11	0.53	2.82	5.81	18.49	78.89	73.11	14.06
% W 2003	9.72	8.46	10.1	10.94	5.8	3.41	32.81	83.94	63.16	17.31
% W 2012	**10.13**	**12.94**	**10.82**	**13.95**	**6.23**	**5.3**	**51.61**	**93.85**	**53.85**	**20.42**
Raw data 2012										
TOTAL W	8	33	41	54	55	7	64	244	7	513
TOTAL STAFF	79	255	379	387	883	132	124	260	13	2512

Table: Trend in the numbers of women staff members by professional category between 1995 (launch of Equal Opportunities programme) and 2012
Source: CERN Personnel Statistics

The longer term aim is to maintain progress in all professional categories and ultimately to match the (currently ~ 20%)average representation of women at the beginning of the career in science and engineering categories

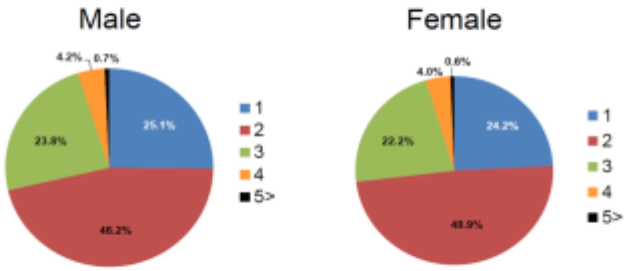
Strategic Objectives – Career Development

#3: More gender role models

Advancement and promotion

- No bias over 7 years of current performance appraisal scheme

Average number of steps over the period 2007-2013



Source: CERN Presentation – 23.09.2013

- Top career paths: greater proportion of eligible men

		Total % of women in professional categories 1,2 and 5A **200**	Total % of men in professional categories 1,2 and 5A **1023**
Senior Staff (Career Paths F & G)	57W / 423M	57/200 **28.5%**	423/1023 **41.3%**
Staff in top career path (G)	7W / 89M	7/200 **3.5%**	89/1023 **8.7%**

Source: CERN Personnel Statistics – 31.12.2012
Note: Total number of men in professional categories (1, 2 and 5A) excluding the Director-General.

The longer term aim is to overcome the glass ceiling effect accumulated over the years

Strategic Objectives – Career Development

#3: More gender role models

- Hierarchical Positions

Hierarchical Position	2000	2013
Line Management (Group & Section Leaders)	27 W / 487 M **5% W**	49 W / 213 M **23% W**
Management Board (DG, Directors & Division Leaders) Enlarged Directorate (DG, Directors & Department Heads)	No women	**1 W** / 12 M

One woman in CERN's Enlarged Directorate

Source: CERN Equal Opportunities report, 2000 & 2013 data provided by the HR Department (31.07.2013).

The longer term aim is to not only have a high count of women but to have women in the positions that count!

#4: Career development for technical and managerial paths in parallel

- To be studied in the context of a forthcoming revision of the CERN Career Path Guide

Strategic Objectives – Work Environment

#5: Promote the exchange of ideas and understanding between generations and professions

- «Diversity in Action» workshops
  - Designed to explore the meaning of diversity and share the experience of working with differences at CERN
  - Aim:
    - Provide participants with insights into diversity
    - Help them develop a greater sensitivity to differences
    - Explore ways to recognise and overcome possible biases

- Workshops to promote dialogue and the exchange of ideas between management and staff

Strategic Objectives – Work Environment

#6: Explore ways to improve work/life balance

- Post-career-break Fellowship Position for STEM researchers
  - Aimed at encouraging graduates to return to either a full-time or part-time position following a career break

- On-site crèche: new facility integrated into the existing Kindergaten, welcoming children aged from 3 months to 6 years

- Disability support: new buildings and building renovations make provision for disabled access. Additional structures such as the construction of banisters have been installed on request

Strategic Objectives – Work Environment

#7: Promote a work environment based on mutual respect and inclusiveness

- Awareness through talks on diversity related topics

«Diversity in the workplace: how to capitalise on differences to foster innovation» by C. Bianchi	«Le cerveau a-t-il un sexe?» by C. Vidal
«From Newton to Hawking and beyond: Why is equality is relevant to the world of particle physics» by T. Shakespeare	«Women in science, technology, engineering and maths (STEM). Where are we now and how we can move?» by J. Bell Burnell

- Informal Networks
  - Permit CERN contributors who share an identifiable common interest in work-related issues to keep in contact with each other and to exchange ideas, information and experiences related to their integration at CERN.

Gender Awareness and Outreach

Actions to raise awareness and promote the drive for women in science
UNESCO – CERN DG on panel discussion on sustained action to «encourage girls and women to consider a career in science»
UN Youth Forum - exchange of ideas on how to attract and retain women in science
CERN teacher training programme & collaboration meeetings - gender-related presentations
Visiting high-school students & shadowing women «role models»
Career Development Workshop at ETH (Zurich) - career opportunities presented to young women scientists
«Expanding Your Horizon» - raising awareness of local school girls
Regular networking & exchange of best-practices/experience
Diversity & Code of Conduct presentation at LHC Collaboration meetings
Language style guides - Recommendation to use gender neutral language wherever possible
CERN Summer Student Lecture Committee collaboration – search for role models

Concluding Remarks

- Recruitment – always partly dependent on external market
  - On-going actions to attract an optimally diverse workforce
  - Support from the Member States would be appreciated

- Career development and Work Environment
  - Anchoring an enabling and inclusive work environment and culture
  - Engaging management and staff as equal stakeholders and ambassadors for diversity

SPARE 2

- 2013 01 20_WAVE conference_SD

Closing the Gender Gap: the present and the Future

WAVE Conference – 2014

Sudeshna Datta-Cockerill, CERN

Diversity at CERN

CERN's Mission

- Push forward the frontiers of knowledge
- Develop new technologies for accelerators and detectors
- Train scientists and engineers of tomorrow
- Unite people from different countries and cultures

Integrity

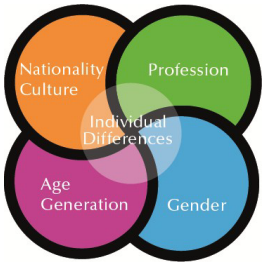
Commitment

Professionalism

Creativity

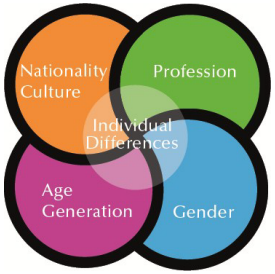
Diversity

Appreciating differences, fostering equality and promoting collaboration



CERN's excellence derives from an environment in which the knowledge and perspectives of a diverse workforce are valued and dialogue is encouraged at all levels

Gender representation – 20% W

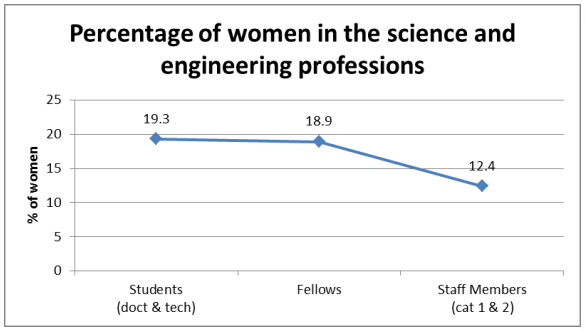


Evolution from 1995 to 2012 in the percentage of women in STEM & professional administration categories

Staff Members	Res Phys	Appl Phys	Computing	Engineer	Prof Admin
% W 1995	2.88	2.9	11.11	0.53	18.49
% W 2012	**10.13**	**12.94**	**10.82**	**13.95**	**51.61**

Source: CERN Personnel Statistics

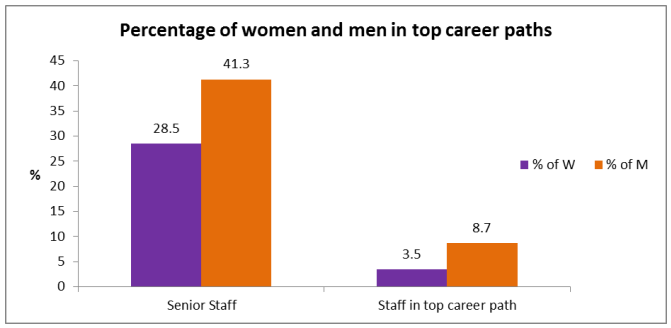
Challenge = maintain / improve progress



Challenge = address the leaky pipeline effect

Positive Action
Not
Positive Discrimination

Source: CERN Personnel Statistics (31.12.2012)
Staff Members categories 1 and 2: Research Physicists and Scientific and Engineering work
Fellows and Students (excluding administrative category)



Challenge = overcome the glass ceiling effect that has accumulated over the years

Source: CERN Personnel Statistics (31.12.2012)

Concretely…achieve Excellence in diversity by…

- **E**ncouraging young girls and women to take up careers in science,

Outreach:
e.g. Teacher Training Programme

ROLE MODELS

- **E**mploying them […] we should address this through equitable processes

- **Added value of differences**
- **Fair treatment**
- **Mutual respect & inclusiveness**

- **E**nabling them, i.e. creating an inclusive work environment that allows everybody to give of their best.

e.g. Support structures

CERN Director General, Rolf Heuer, 2013

Gender Diversity – a CERN secret!

Part of complete coverage on
Leading Women

LEADING WOMEN

CERN's Fabiola Gianotti: The woman hunting the Higgs boson

By **Rose Hoare**, CNN
July 4, 2012 -- Updated 1244 GMT (2044 HKT)

CERN experimental physicist Fabiola Gianotti in the ATLAS detector, 14 April, 2007.