



# Competency-based Learning Management

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PCT International Cooperation Division

# Agenda

- Competency models/frameworks
- Learning management system

# Curriculum based training

Friday, March 11, 2016

9.30 – 11.00

**Session 9**

**Patent Search Strategy**

**(a) Basics of Patent Search**

Speaker: To be determined

11.15 – 12.30

**(b) Practices in the Specific Technical Field  
(Two Groups: Chemistry and, Biotechnology and Mechanics)**

Speaker: To be determined

12.30 – 14.00

Lunch Break

14.00 – 15.30

**Session 10**

**Access to and Use of Foreign Examination Results**

**(a) Strategic Use of Patent Work-Sharing Tools**

Speaker: To be determined

15.30 – 17.00

**(b) Access to Patent Prosecution History**

Speaker: To be determined

# Competency model/framework/dictionnary

- Competencies derived from/related to job descriptions: "job deliverables"
- Different categories
  - Behavioral, e.g. communication, managing,..
  - **Technical competencies**
- To attain/demonstrate a specific technical competency, a set of distinct
  - **skills** and
  - **knowledge** elements is required

## Communication

<b>Definition</b>		<b>Behavioural Indicators</b>				
<b>Effectively receives and conveys ideas and information (verbal and/or written) in a way that increases the understanding of the target audience.</b>		<b>Level 1: Basic</b>	<b>Level 2: Capable</b>	<b>Level 3: Proficient</b>	<b>Level 4: Very Proficient</b>	<b>Level 5: Mastery</b>
<b>Communicates clearly to others</b>	<b>Communicates effectively to a wider audience</b>	<b>Adapts language and content to the audience</b>	<b>Conveys and receives complex messages</b>	<b>Develops influential communication strategies</b>		
Effectively prepares brief documents (e.g. email, letters, standard forms, etc.).  Conveys messages to individuals in a clear and concise manner.	Presents ideas, proposals, concepts and other information with clarity.  Expresses one's own opinion appropriately.  Writes documents (e.g. summaries of meetings) that are comprehensive, yet concise, combining information from various sources, as required.	Actively listens and verifies own understanding of the issue.  Asks open-ended questions to encourage others to share their views/opinions.  Anticipates audience needs and concerns and adapts content, style, mode and tone accordingly.  Provides tactful feedback.  Writes documents on specific issues, combining information from multiple sources.	Prepares a range of written documents such as briefing notes or lengthy reports.  Effectively uses multiple methods to ensure understanding of groups' input, for example, meetings, individual conversations, reformulation technique etc.  Clearly communicates multifaceted, abstract information with the aid of data (e.g., program evaluations, cost / benefit studies, etc.).	Identifies appropriate communication strategies to communicate with a diversity of people for the purposes of education or information, with high impact.  Understands the needs of the audience, reading beyond what has been communicated, and builds on others' responses in order to formulate strategy.  Effectively presents complex messages in ways that diverse audiences can understand.  Able to interpret conflicting and sometimes contradicting verbal and non-verbal signals from the audience.		

\*\* *Communication links to the TBS Core Competency Working effectively with others.*

# RPET CM sample: examination skills

## 5. Consider unity of invention

The examiner assesses unity of invention in uncomplicated examples.

The examiner demonstrates effective application of unity of invention in more complex generic, and technology- specific examples.

The examiner demonstrates thorough understanding and application of the concept of unity of invention when analysing increasingly complex real technology specific cases.

The examiner consistently and independently identifies unity of invention., and able to categorise the invention into appropriate groups. Any relevant objections are fully justified.

PQS 3.2.1  
PQS 4.1, 5.1

## 6. Consider industrial applicability

NOT COVERED IN PHASE A

The examiner demonstrates effective application of PCT criteria for industrial applicability in a mixture of technology-specific and more complex generic examples.

The examiner demonstrates a thorough understanding and application of PCT criteria for industrial applicability when analysing increasingly complex real technology specific cases.

The examiner consistently, accurately and independently checks whether inventions satisfy PCT criteria for industrial applicability. Any relevant objections are fully justified.

PQS 2.3.3  
PQS 4.1, 5.1

## 7. Determine if novelty exists

The examiner assesses novelty in simple example cases.

The examiner determines novelty in increasingly complex generic and simple technology-specific cases.

The examiner consistently applies his/her knowledge of novelty to increasingly complex real technology specific cases, and provides appropriate justifications for any objections.

The examiner consistently and accurately analyses prior art documents to assess whether each and every claimed element has been disclosed to a PSA by the priority dates. The examiner also consistently gives appropriate justifications for any relevant objections.

PQS 2.3.1  
PQS 4.1, 5.1

# Sample: RPET competencies (technical skills)

- Interpret specifications in accordance with rules of construction
- Consider the description
- Determine the invention
- Determine the scope of claims
- Consider clarity
- Consider clear and complete disclosure and full support
- Consider excluded subject matter
- Consider unity of invention
- Construe the scope of each claim (with regard to novelty and inventive step)
- Consider industrial applicability
- Develop an effective search strategy
- Conduct online search
- Determine relevant prior art
- Undertake appropriate record keeping

# Sample: RPET competencies (technical skills)

- Determine if novelty exists
- Determine common general knowledge
- Determine if an inventive step exists
- Demonstrate knowledge and application of IPC system for indexing
- Produce first reports / opinions
- Consider amendments and / or arguments
- Determine the allowability of the amendments
- Demonstrate decision-making capability when considering attorneys'/ applicants' submissions
- Produce further reports (clear or adverse)

**Work-sharing** for PCT NPE examination?



# Sample detailed competencies of examiner

## Field: **Work-sharing**

- Identify patent family relations for given application [**basic**]
- Research examination status of family members [**basic**]
- Retrieve examination work products for family members [**basic**]
- Assess applicability/utility of examination work products to application awaiting examination [**medium**]
  - Claims granted in other jurisdictions
  - Search and examination reports prepared in other jurisdictions
- Select suitable claim set for grant compatible with national requirements [**medium**]
- Communicate reasons for selecting a claim set and motivate applicant to adopt proposal [**medium**]
- Utilize foreign search reports/citations for preparing a search report for a pending application [**medium**]
- Utilize foreign examination reports/rejection rulings for preparing an examination report for a pending application [**advanced**]
- Utilize foreign examination reports for preparing a rejection ruling for a pending application [**advanced**]

## WIPO Assessment of Individual Examiner Training Needs

Name:	<u>Organisation:</u>	Date:	
	I am confident to do so	I feel somehow confident to do so but may need some training to improve my skills and knowledge on this matter	I have never had training on this matter
<b>Patent information</b>			
Name and explain the different parts of a patent document			
Explain types and categories of claims			
Explain application, publication and priority numbers, their relation to each other and their formats			
Explain the different types of patent documents (publication stages) and the concept of kind codes			
Determine the meaning of a given kind code			
Explain the concept of INID codes			
Explain what WIPO Standards are and name at least 2 different WIPO Standards			
Explain what authoritative (primary) sources of patent information are and give at least 3 examples			
Explain the difference between 'published' and 'publicly available' ('made available to the public', 'laid open')			

<b>Search methodologies</b>			
Perform a 'fielded' search ('search forms')			
Explain what 'structured data' are			
Perform a command query search			
Use Boolean operators			
Use truncation			
Explain stemming in comparison to truncation			
Use proximity operators			
Use nesting and the hierarchy of operators			
Search for phrases			
Use field identifiers			
Search documents published between two given dates (date range)			
Determine classification codes through keyword searches for patent documents			
Search keywords and/or classifications in one query			
Search all patent publications of a given country published before a given date and having two different keywords or their synonyms as well as their plurals in the abstract, and being classified in an IPC main group or all its subgroups			
Explain what the 'recall' and the 'precision' of a search query are			
Refine a search strategy to increase recall			
Refine a search strategy to increase precision			
Explain effects of keyword searching in different parts of the document and the impact on recall and precision			
Explain the concept of family reduction			
Test if a database applies family reduction to a result set			

# Why do we need detailed competency models?

- Sufficiently detailed competency models/frameworks facilitate, **in standardized manner**,
  - Define individualized competency models
  - Communication of training needs
    - Beneficiary to provider/WIPO & WIPO to provider/donor
  - Definition of prerequisites for training activities (by provider)
  - Description of course content (by provider)
  - Standardized tracking of training progress in terms of competencies
    - Participation
    - Success of learning
  - Reporting
- Assure that each examiner **trainee** attains all desired competencies as defined by the applicable **individual competency model**
- Assure efficient use of training opportunities provided by donors by avoiding
  - redundant/duplicate participation
  - inefficient participation if prerequisites for participation are not met

# Generic competency framework

- Competencies/skills/knowledge organized in different **fields (of learning)**, e.g.:
  - Statutory and customary framework: international & regional treaties/conventions, national laws and regulations, case law, guidelines and manuals
  - Patent information: WIPO standards, publication policies, classification, databases ...
  - Formality examination
  - Prior art retrieval:
    - Generic
    - Technology specific
    - Database specific
    - Non-patent literature
  - Substantive examination:
    - Generic: patentability requirements, ..
    - Technology specific: software related inventions, biotechnology, genetic resources ..

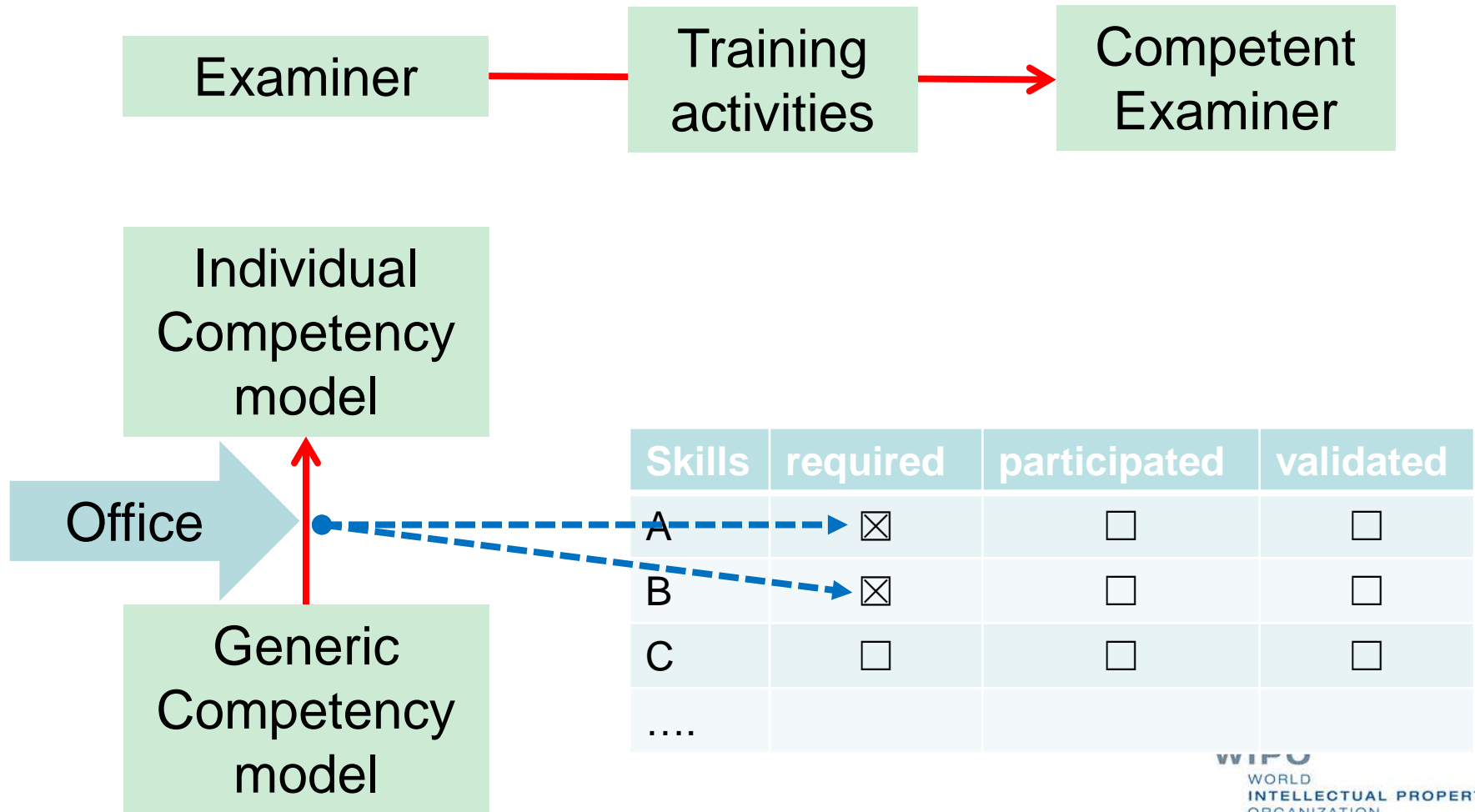
# Competency model

- .....
- Work-sharing: researching family relations, examination status, claim comparison, citation comparison, understanding different national practices, ....
- Report writing and other administrative tasks
- Supplementary:
  - Specific search and examination or administration tools: specialized databases, IPAS, ...
  - Patent drafting
  - Hearing, appeal, opposition specific
  - ISA specific tasks
  - Infringement, enforcement
  - Quality management
  - Technology transfer, commercialization,...
  - Patent analytics
  - Advisory services, promotion, outreach...

# Competencies and training

- No "one fits all" approach:
  - Different organizations
  - Different individuals (job descriptions)
- Different competencies required depending on
  - How an office organizes substantive examination
    - Stand alone substantive examination (middle to large offices)
      - IPET, RPET: (more) emphasis on **prior art search skills**
    - Outsourcing (small offices): emphasis on **outsourcing skills**
  - Additional skills needed for further activities like IP promotion, advisory services for applicants, ...

# Defining individual competency model





# Individualized learning management (ASPAC)

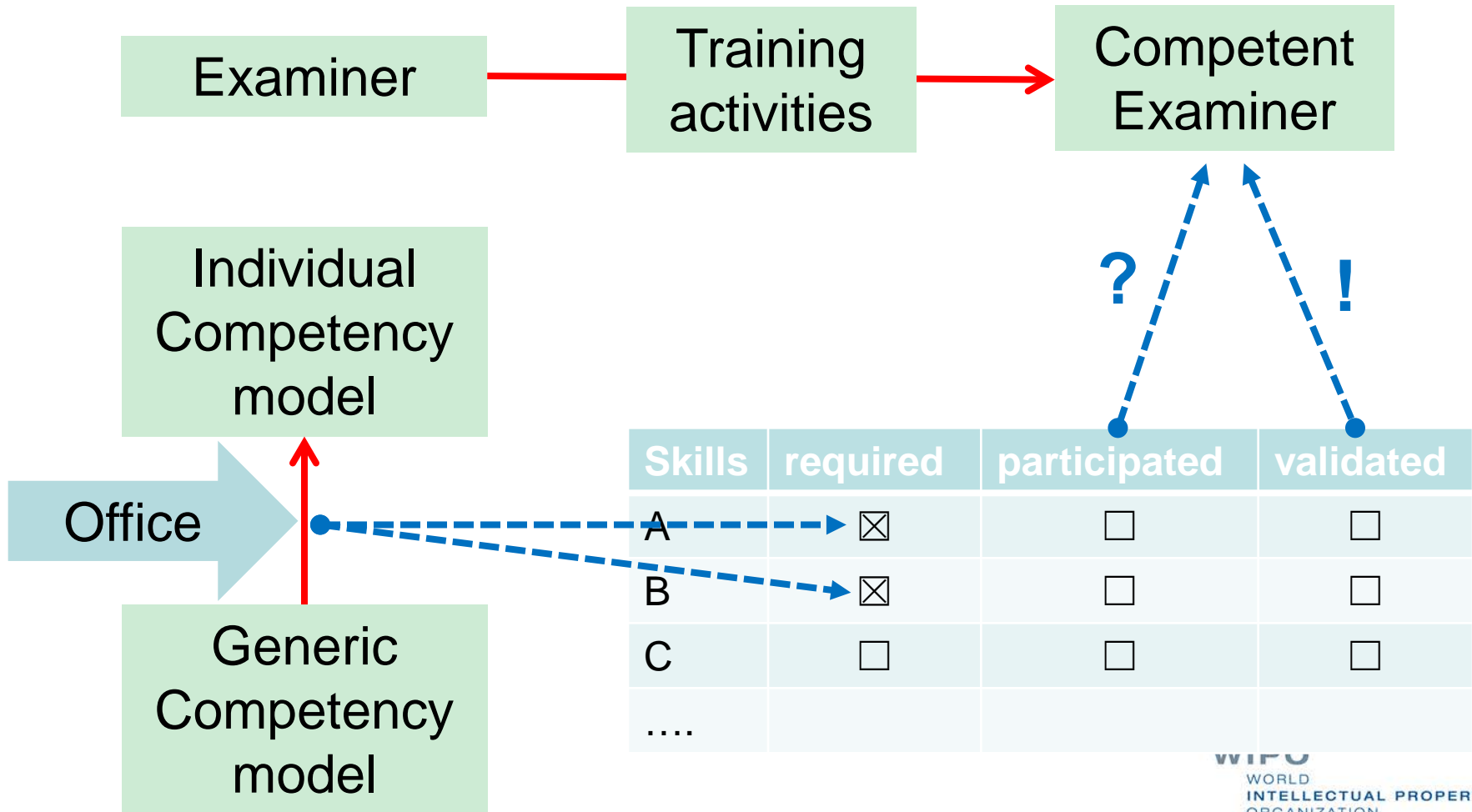
**Objective** of examiner training management:

- Assure that each examiner **trainee** attains all desired competencies as defined by the applicable **individual competency model**
  - by **tracking** participation in relevant training opportunities, in particular
  - By **tracking** competencies/skills/knowledge acquired thereby
    - (optionally) **Assessing** success of learning (validating)
  - by **assigning** suitable and available training opportunities

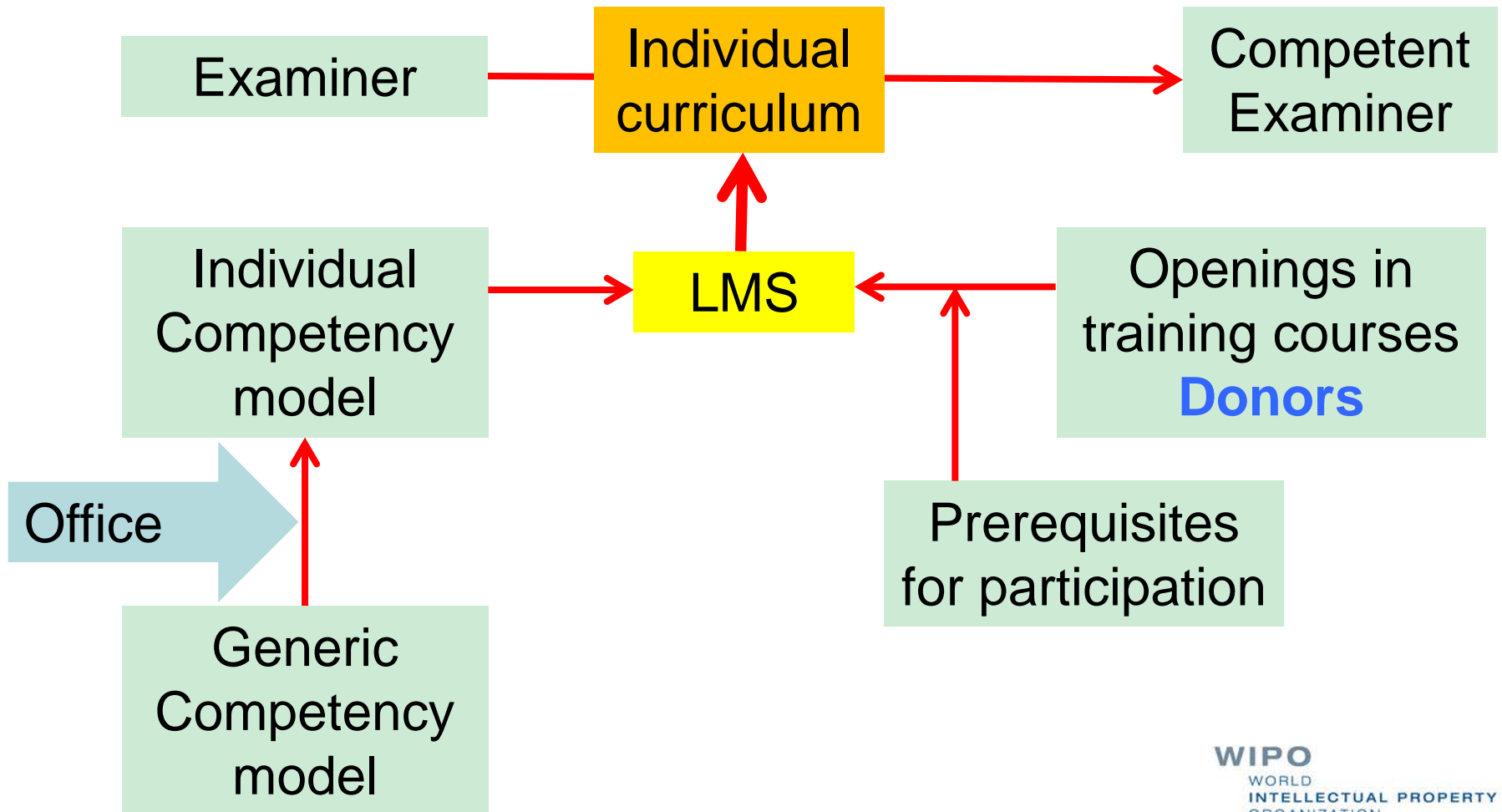


Learning Management System (LMS)

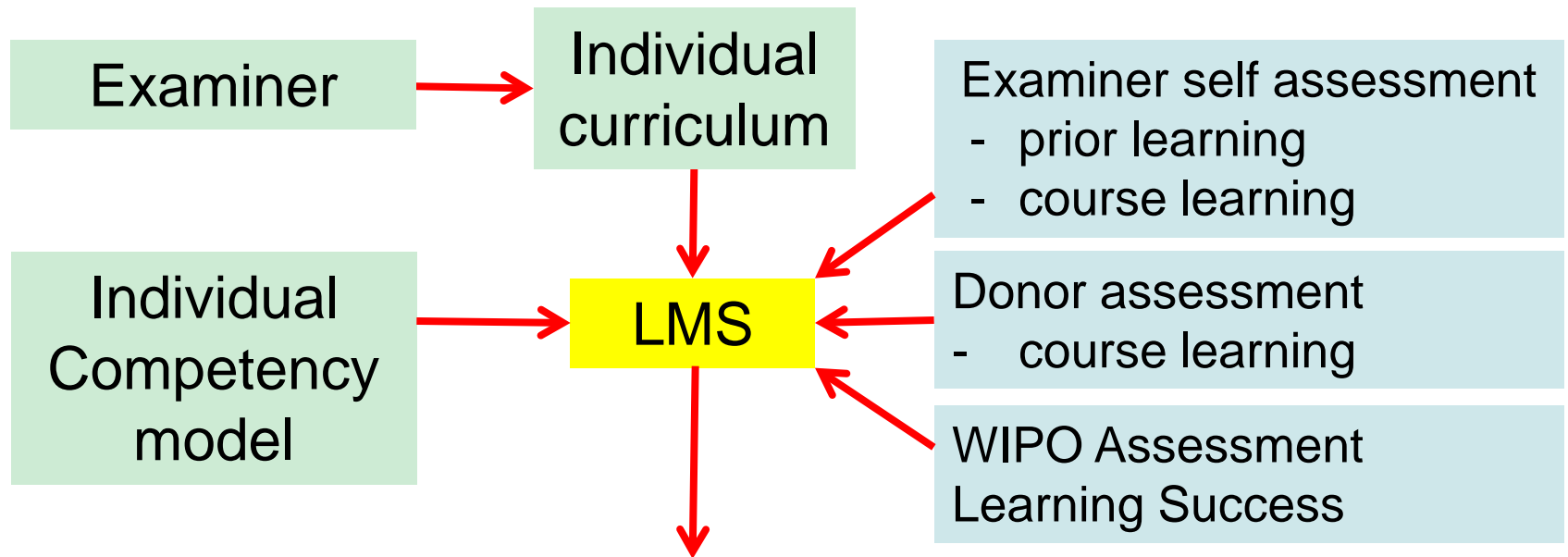
# LMS: recording and tracking



# LMS: Managing course participation



# Tracking Learning Progress



Skills	required	participated	validated
A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
....			



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The Free Encyclopedia

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Featured content  
Current events  
Random article  
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About Wikipedia  
Community portal  
Recent changes  
Contact page

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Related changes  
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# List of learning management systems

From Wikipedia, the free encyclopedia

See also: *Category:Learning management systems*

The following is a **list of learning management systems (LMS)**.

**Contents** [\[hide\]](#)

- 1 Open source
- 2 SAAS/CLOUD
- 3 Proprietary
- 4 Historical
- 5 References

## Open source [\[edit\]](#)

- aTutor
- Canvas
- Chamilo
- Claroline
- eFront
- ILIAS
- LAMS
- Moodle 
- OLAT
- OpenOLAT
- Sakai
- SWAD
- Totara LMS
- WeBWork

## SAAS/CLOUD [\[edit\]](#)

- Cornerstone OnDemand Inc.

[DOCUMENTATION](#)[DOWNLOADS](#)[DEMO](#)[TRACKER](#)[DEVELOPMENT](#)[TRANSLATION](#)[MOODLE.NET](#)

English - United States (en\_us)

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## Community driven, globally supported.

Welcome to the Moodle community and discover the value of an open, collaborative effort by one of the largest open-source teams in the world.

[COMMUNITY FORUMS](#)



Supported by a global community



Robust open-source learning platform



Powering learning environments worldwide



Moodle stories from around the world

Home ▶ Latest release

## Latest release

Install Moodle on your own server (requires a web server with PHP and a database) by downloading one of the following packages or obtaining Moodle via Git.

Alternatively, try Moodle on your personal computer with an installer package which includes all other software required to make it run (Apache, MySQL and PHP).

- [Moodle installer package for Mac OS X](#)
- [Moodle installer package for Windows](#)

Version	Information	.tgz	.zip
<b>Moodle 3.2.3</b> <small>MOODLE_323</small>	This is the latest official update of Moodle 3.2. <ul style="list-style-type: none"> <li>• <a href="#">Release notes</a></li> <li>• <a href="#">Fixed issues</a></li> <li>• <a href="#">Upgrading notes</a></li> <li>• <b>Requires:</b> PHP 5.6.5, MariaDB 5.5.31 or MySQL 5.5.31 or Postgres 9.1 or MSSQL 2008 or Oracle 10.2</li> <li>• <a href="#">Language packs</a></li> </ul>	<div style="text-align: center;"> <div style="background-color: #0056b3; color: white; padding: 5px; display: inline-block; border-radius: 3px;">Download tgz</div> </div> <p style="text-align: center;">37.7MB 606 today</p> <p style="text-align: center;"><a href="#">[md5]</a> <a href="#">[sha256]</a></p>	<div style="text-align: center;"> <div style="background-color: #0056b3; color: white; padding: 5px; display: inline-block; border-radius: 3px;">Download zip</div> </div> <p style="text-align: center;">49.7MB 1551 today</p> <p style="text-align: center;"><a href="#">[md5]</a> <a href="#">[sha256]</a></p>

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[Development release](#)

# WIPO ASPAC Bureau Individualized Competency Based Learning Management

## WIPO

This is a test site for implementing the individualized and competency based patent examiner training management.

## COURSE CATEGORIES

- International legal framework
- National legal framework
- Search methodologies
- Miscellaneous
- All courses ...

## NAVIGATION

- Home
- Site announcements
- Courses

Don't worry about your **TRAINING**,  
we'll create and provide **OPPORTUNITIES**.

## Site announcements



### ASPAC ICBLM born

by - Admin - - Saturday, 25 February 2017, 9:59 am

We are happy to announce that a new baby of the WIPO ASPAC Bureau has been born on February 23, 2017, named ASPAC **Individualized and Competency Based Learning Management**. We trust it gradually growing to a fully fledged application capable to support all aspects of managing the vocational training of individual substantive patent examiners from recruitment to full expertise in all areas of an individually

## LOGIN



Username

Password

[Lost password?](#)



### NAVIGATION

#### Home

- Dashboard
- ▶ Site pages
- ▼ My courses
  - ▶ BGS
  - ▶ About

### ADMIN BOOKMARKS

[Bookmark this page](#)

### ADMINISTRATION

#### ▼ Site administration

- ⚙️ Notifications
- ⚙️ Registration
- ⚙️ Advanced features
  - ▶ Users
  - ▶ Courses
  - ▶ Grades

#### ▼ Competencies

- ⚙️ Competencies settings
- ⚙️ Migrate frameworks
- ⚙️ Import competency framework

## Competency frameworks

Add new competency framework

Competency frameworks repository

### List of competency frameworks

Name	Competencies	Category	Actions
<a href="#">Substantive Patent Examination (0)</a>	28	System	<a href="#">Edit</a> ▼

NAVIGATION

Home

- Dashboard
- ▶ Site pages
- ▼ My courses
  - ▶ BGSM
  - ▶ About

ADMIN BOOKMARKS

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ADMINISTRATION

- ▼ Site administration
  - ⚙️ Notifications
  - ⚙️ Registration
  - ⚙️ Advanced features
    - ▶ Users
    - ▶ Courses
    - ▶ Grades
  - ▼ Competencies
    - ⚙️ Competencies settings
    - ⚙️ Migrate frameworks

## Import competency framework

CSV framework description file\* ?

Choose a file...



CSV delimiter

Encoding

Import

There are required fields in this form marked \*.

## Home

- [Dashboard](#)
- ▶ [Site pages](#)
- ▼ [My courses](#)
  - ▶ [BGSM](#)
  - ▶ [About](#)

ADMIN BOOKMARKS  [Bookmark this page](#)ADMINISTRATION  

- ▼ [Site administration](#)
  - [Notifications](#)
  - [Registration](#)
  - [Advanced features](#)
    - ▶ [Users](#)
    - ▶ [Courses](#)
    - ▶ [Grades](#)
- ▼ [Competencies](#)
  - [Competencies settings](#)
  - [Migrate frameworks](#)
  - [Import competency framework](#)
  - [Export competency framework](#)

# Substantive Patent Examination

Generic competency framework for substantive patent examiners

## Competencies



- ▼ [Substantive Patent Examination](#)
  - ▶ [International legal framework](#)
  - ▼ [National legal framework](#)
    - ▶ [National patent prosecution workflow](#)
- [PCT system](#)
- ▼ [Patent information](#)
  - ▶ [WIPO Standards](#)
    - [National publication practices and types of patent documents](#)
- [Patent classification](#)
- [Formality examination](#)
- ▶ [Generic substantive examination](#)
- [Technology specific substantive examination](#)
- [Generic search methodologies](#)
- [Technology specific search methodologies](#)
- [Specific search and examination databases and tools](#)
- [Work-sharing](#)
- [Procedural tasks related to patent prosecution](#)
- ▼ [Supplementary competencies](#)
  - [generic IP promotion](#)
  - [PCT promotion](#)

### Selected competency

No competency selected

4 levels of hierarchy

- Dashboard
- Site pages
- My courses
  - BGSM
  - About

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Bookmark this page

- ADMINISTRATION**
- Site administration
    - Notifications
    - Registration
    - Advanced features
      - Users
      - Courses
      - Grades
    - Competencies
      - Competencies settings
      - Migrate frameworks
      - Import competency framework
      - Export competency framework
      - Competency frameworks

Generic competency framework for substantive patent examiners

## Competencies

Search...

- Substantive Patent Examination
  - International legal framework**
  - National legal framework
    - National patent prosecution workflow
  - PCT system
  - Patent information
    - WIPO Standards
    - National publication practices and types of patent documents
  - Patent classification
  - Formality examination
    - Generic substantive examination
    - Technology specific substantive examination
  - Generic search methodologies
  - Technology specific search methodologies
  - Specific search and examination databases and tools
  - Work-sharing
  - Procedural tasks related to patent prosecution
  - Supplementary competencies
    - generic IP promotion
    - PCT promotion

**Selected domain**

**International legal framework** A Edit

Cross-referenced

No other competencies linked to this competency

+ Add domain

- Edit
- Relocate
- Delete
- Move up
- Move down
- Linked courses
- + Add cross-referenced competency
- Competency rule

# Individual trainees

### NAVIGATION

- Home
  - Dashboard
  - Site pages
    - Participants**
    - Site blogs
    - Site badges
    - Notes
    - Tags
    - Calendar
  - Site announcements
- My courses
  - BGSM
  - About

### ADMINISTRATION

- Front page settings
  - Turn editing on
  - Edit settings
    - Users
  - Filters
  - Reports
  - Backup
  - Restore
  - Question bank

## Participants

My courses: ASPAC ICBLM | Inactive for more than: Select period | User list: Brief

Role: All site users

### All participants: 4

First name : All A B C D E F G H I J K L M N O P Q R S T U V W X Y Z  
Surname : All A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Select	User picture	First name / Surname	Email address	City/town	Country	Last access to site
<input type="checkbox"/>		- Admin -	admin@localhost	Somewhere	Australia	now
<input type="checkbox"/>		<b>Andrew Ong</b>	andrew.ong@wipo.int	Geneva	Switzerland	73 days 10 hours
<input type="checkbox"/>		- Test -	test@localhost	Somewhere	Australia	2 years 299 days
<input type="checkbox"/>		<b>Guest user</b>	root@localhost			Never

Select all | Deselect all

With selected users...

Choose...

# Individual competency model

### NAVIGATION

- Home
  - Dashboard
  - Site pages
  - My courses
    - BGSM
    - About

### ADMIN BOOKMARKS

Bookmark this page

### ADMINISTRATION

- Site administration
  - Notifications
  - Registration
  - Advanced features
    - Users
    - Courses
    - Grades
- Competencies
  - Competencies settings
  - Migrate frameworks
  - Import competency framework

## Andrew Ong

Individual learning plan of Andrew Ong.

Add competencies to learning plan template



### Learning plan template competencies

1 out of 4 competencies linked to courses



0 out of 1 learning plans completed for this template



"Learning plan" = Individual competency model

#### Paris Convention A.1

Substantive Patent Examination - Domain

Path: Substantive Patent Examination / A

Linked courses: No courses are linked to this competency

#### National patent prosecution workflow

Substantive Patent Examination - Domain

Path: Substantive Patent Examination / B

Linked courses: No courses are linked to this competency

# Create new individual competency model

## Management

Home > Site administration > Competencies > Learning plan templates > Add new learning plan template

### NAVIGATION

- Home
  - Dashboard
  - Site pages
  - My courses
    - BGSM
    - About

### ADMIN BOOKMARKS

Bookmark this page

### ADMINISTRATION

- Site administration
  - Notifications
  - Registration
  - Advanced features
    - Users
    - Courses
    - Grades
    - Competencies

## Learning plan templates

### Add new learning plan template

#### General

Name\* John Sandage 

Description



[Empty text area for description]

Visible  Yes

Due date       Enable

Category System

# WIPO ASPAC Bureau Individualized Competency Based Learning Management

Home ▶ Site administration ▶ Competencies ▶ Learning plan templates ▶ John Sandage

## NAVIGATION

Home

- Dashboard
- ▶ Site pages
- ▼ My courses
  - ▶ BGSM
  - ▶ About

## ADMIN BOOKMARKS

Bookmark this page

## ADMINISTRATION

- ▼ Site administration
  - ⚙️ Notifications
  - ⚙️ Registration
  - ⚙️ Advanced features

Learning plan template created

## John Sandage \*

Add competencies to learning plan template



## Learning plan template competencies

No competencies have been linked to this learning plan template.

Manage competencies and frameworks



# WIPO ASPAC Bureau Learning Management

Home > Site administration > Competencies >

## NAVIGATION

- Home
  - Dashboard
  - Site pages
  - My courses
    - BGSM
    - About

## ADMIN BOOKMARKS

Bookmark this page

## ADMINISTRATION

- Site administration
  - Notifications
  - Registration
  - Advanced features

### Competency picker

Competency frameworks  
Substantive Patent Examination 0

Locate competency  
Search...

- Substantive Patent Examination
  - International legal framework
  - National legal framework
  - PCT system
    - Patent information
    - Patent classification
    - Formality examination
  - Generic substantive examination
    - Clarity of claims
    - Sufficient and clear disclosure
  - Technology specific substantive examination
  - Generic search methodologies
  - Technology specific search methodologies
  - Specific search and examination databases and tools
  - Work-sharing
  - Procedural tasks related to patent prosecution
- Supplementary competencies
  - generic IP promotion
  - PCT promotion** ←

# Learning

Thank you

[lutz.mailander@wipo.int](mailto:lutz.mailander@wipo.int)

# Summary: Individualized Learning Management

## ASPAC Bureau

- Competency model (CM) based rather than curriculum based
- No one fits all approach: competency models tailored to needs/constraints of IPOs
  - Small
  - Medium
- Learning Management System (LMS) for
  - Tracking and monitoring learning progress
  - Managing course assignment
  - Matching training needs with donor programs
  - Reporting, e.g. on examination capacities of office staff
- Availing of donor organized 'courses' (JPO, KIPO, EPO, USPTO, IP-AU,...;)
- **Objective** of examiner training management:
  - Assure that each examiner trainee attains all desired competencies by assigning and monitoring/tracking participation in relevant training opportunities
  - Efficient use of training opportunities provided by donors by avoiding/minimizing
    - redundant/duplicate participation
    - inefficient participation (lack of prior learning, experience)