

*EC Grant Agreement n°609788*

# CHEETAH

**Cost-reduction through material optimisation and Higher EnERgy output of solAr pHotovoltaic modules - joining Europe's Research and Development efforts in support of its PV industry**

## Deliverable

**D2.17 -Updated knowledge sharing web area based on utilization of the project website developed in task 4.1/deliverable 4.1**

**WP2 Fostering the use of existing facilities and expertise**



## Section 1 – Document Status

### Document information

|  |   |
|--|---|
| <b>Deliverable name</b>                | D2.17 -Updated knowledge sharing web area based on utilization of the project website (task 4.1/deliverable4.1) |
| <b>Lead beneficiary</b>                | ENEA  |
| <b>Due delivery date from Annex I</b>  | M12   |
| <b>Actual / forecast delivery date</b> | M13   |
| <b>Dissemination level</b>             | Public  |

### Document validation

| <b>Name</b>              | <b>Organisation</b> | <b>Date</b> | <b>Visa</b> |
|--------------------------|---------------------|-------------|-------------|
| Franco Roca – WP2 leader | ENEA                | 23.02.2015  | ok          |
| Jan Kroon - Coordinator  | ECN                 | 25.02.2015  | ok          |

### Document history

| <b>Version</b> | <b>Date</b> | <b>Modifications</b>         | <b>Name</b>  |
|----------------|-------------|------------------------------|--------------|
| V0             | 21/12/2014  | Draft version                | F.Roca       |
| V1             | 12/01/2015  | Draft version                | F.Roca       |
| V2             | 30/01/2015  | Implemented version          | F.Roca       |
| V3             | 6/02/2015   | Submitted to the coordinator | F.Roca       |
| V3             | 18/02/2015  | Comments                     | J.Kroon      |
| V4             | 23/02/2015  | Revision                     | F.Roca       |
| Vf             | 24/02/2015  | Format and typo corrections  | Tania Langon |

## Section 2 – Table of content

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## Section 3 – Publishable summary

CHEETAH Knowledge Exchange Portal (KEAP, <http://www.cheetah-exchange.eu>) constitutes, in parallel to project web site and other project dissemination initiatives (newsletter, communication, etc), the tool to bring information from different sources, in a uniform and simple way, to all CHEETAH partners as a permanent channel fostering the use of existing facilities and expertise (WP2).

CHEETAH KEAP operates from the collection of availability of expertise/infrastructure (supply site), to its elaboration (management) and its final offer to project partners (demand site). For that reason, it represents the main pillar for WP2.

Based on several very efficient ICT procedures for the collection and management of information, it operates as a dynamic data base matrix: any uploaded information is linked to any other by dynamic links that allow access to information as well as to a cluster of information.

All interested browsers/readers can have efficient access to stored data thanks to the utilization of search engine/query keywords used in connection with the more diffuse and efficient ICT procedures and user friendly graphic interfaces.

CHEETAH KEAP represents a major breakthrough in the field with highly innovative contents and a substantial improvement in comparison with the state of the art of knowledge exchange on PV RTD. The ICT technical management is periodically revised and implemented to adapt the web portal to new necessities on PV RTD fields/topic cataloguing/search. The deliverable (D2.17) offers the following very important new functionalities:

- The web portal is now open to any interested external organization ie non CHEETAH EERA-PV , SOPHIA and other associated partners
- Development of reserved area, with access denied to external partners
- Implementation of CHEETAH Webinar, a complete e-learning platform that can be utilized to offer lectures, courses and remote on-line experiments
- On-line forum/fora for internal/external technical/scientific discussions on specific themes
- On-line questionnaire tool to optimize submission and collection of requested specific information.

## Section 4 – Executive summary

### Description of the deliverable content and purpose

CHEETAH Knowledge Exchange Portal (KEAP, <http://www.cheetah-exchange.eu>) constitutes, in parallel to project web site and other project dissemination initiatives (newsletter, communication, etc), the tool to bring information from different sources, in a uniform and simple way, to all CHEETAH partners as a permanent channel fostering the use of existing facilities and expertise (WP2).

CHEETAH KEAP operates from the collection of availability of expertise/infrastructure (supply site), to its elaboration (management) and its final offer to project partners (demand site). For that reason, it represents the main pillar for WP2. CHEETAH KEAP has introduced several very efficient ICT procedures for the collection and management of information. Furthermore the web portal operates as a dynamic data base matrix: any uploaded information is linked to the other by dynamic links that allow access to any individual information as well as to a already uploaded cluster of information.

All interested browsers/readers can have efficient access to stored data thanks to the utilization of search engine/query keywords used in connection with the more diffuse and efficient ICT procedures and user friendly graphic interfaces.

The ICT technical management is periodically revised and implemented to adapt the web portal to new necessities on PV RTD fields/topic cataloguing/search. The information content is periodically revised on daily/weekly/monthly basis.

All key participants are directly involved in the process and in real time, as it usually happened in exchange web site like Linked-in, Research-Gate, Google-Scholar.

The deliverable (D2.17) offers the following very important new functionalities:

- The web portal is now open to any interested external organization ie non CHEETAH EERA-PV partners and SOPHIA organization, other associated partners
- Development of reserved area, with access denied to external partners
- Development of new search engines with more friendly interface
- Implementation of CHEETAH Webinar, a complete e-learning platform can be utilized to offer lectures, courses and remote on-line experiments
- On-line forum/fora for internal/external technical/scientific discussions on specific themes
- *on-line questionnaire tool to optimize submission and collection of requested specific information.*

## **Brief description of the state of the art and the innovation brought**

CHEETAH KEAP represents a relevant tool to disseminate internally and externally to CHEETAH technical/scientific community information from different sources (expertise, infrastructures, PV RTD technologies, PV RTD tags, equipment, technical document, position papers, etc) in a uniform and usable way and it avoids double work on the collection of information and on its elaboration maximizing the knowledge exchange supply, collection and offer.

Several very efficient ICT procedures for the collection and management of information are currently introduced on daily/weekly/monthly base following necessities of the project and its WP/task leaders and consortium members.

From this point of view, the procedure to collect and offer information to CHEETAH partners and other project consortia has never been experienced in Europe and it represents a major breakthrough in the field on PV RTD with highly innovative contents and a substantial improvement in comparison with the state of the art of knowledge exchange.

For that reason the updating process for the ICT procedures isn't just an updating process concerning information content of the web site, but it leads to the development of new procedures and ICT tools that are totally different from any conventional html web site updating approach.



# CHEETAH KEAP

## Knowledge exchange Area portal

**Development of improved ICT tools to share  
knowledge, updated technical content of  
CHEETAH KEAP**

**As for Dec 31<sup>st</sup> 2014 (M12)**

### CHEETAH KEAP TEAM

**Responsible**

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## 1. New functionalities introduced in CHEETAH KEAP as Dec. 31<sup>st</sup> 2014

CHEETAH KEAP represents a relevant tool to disseminate internally and externally to CHEETAH technical/scientific community information from different sources (expertise, infrastructures, PV RTD technologies, PV RTD tags, equipment, technical document, position papers, etc)

It is based on several very efficient ICT procedures for the collection and management of information that are currently introduced on daily/weekly/monthly base following necessities of the project and its WP/task leaders and consortium members.

For that reason the CHEETAH KEAP updating process is different from any conventional html web site updating process because it deeply involves the development of new procedures and ICT tools.

During period 7M-12M all WP/task leaders and project members were involved in offering information on PV technologies, PV RTD Tag and equipment description. The web site was also implemented by offering access to external non CHEETAH partners who can now provide their infrastructures description news, technical documents... Among them CNRS, France, and other initiative like RSE, CENER, and several European universities experts/infrastructures/information profiles are in progress. The following relevant ICT tools were introduced and tested during the period August 2014-December 2014.

- The web portal is now open to any interested external organization ie non CHEETAH EERA-PV partners and SOPHIA organization, other associated partners
- This imposed the development of reserved area and access procedure with web area denied to external partners
- CHEETAH Webinar, a complete e-learning platform can be utilized to offer lecture, course and remote on-line experiments
- On-line forum/fora for internal/external technical/scientific discussions on specific themes/topic
- on-line questionnaire tool to optimize submission and collection of specific information requested.

The deliverable report has been submitted among WP2 partners in draft version before CHEETAH general assembly in Chambéry, January 2015. After the general assembly, an updated version was created based on the provided input. In the following paragraphs the main peculiarities of new introduced functionalities are summarized.

## 2. Web Area for non-CHEETAH External partners

CHEETAH Knowledge Exchange web area Portal is an open source portal open on request to any interested non-CHEETAH organization:

*D2.17 -Updated knowledge sharing web area based on utilization of the project website (task 4.1/D4.1)*



- EERA-PV and EU-PV platform partners could be also interested to participate to project activity
- Any public, private research centres and universities actively involved in PV energy research and located in the European Union or associated countries
- Any outstanding worldwide entity or organization strongly focused in RTD on photovoltaics and interested to tightly collaborate with CHEETAH consortium on research activity not subject to IP or information restriction.

Non CHEETAH external partners, as for CHEETAH organizations are listed in alphabetical order. A set of useful information is associated to each External organization (expertise, infrastructures, technical documents, courses, webinars, discussion, news)

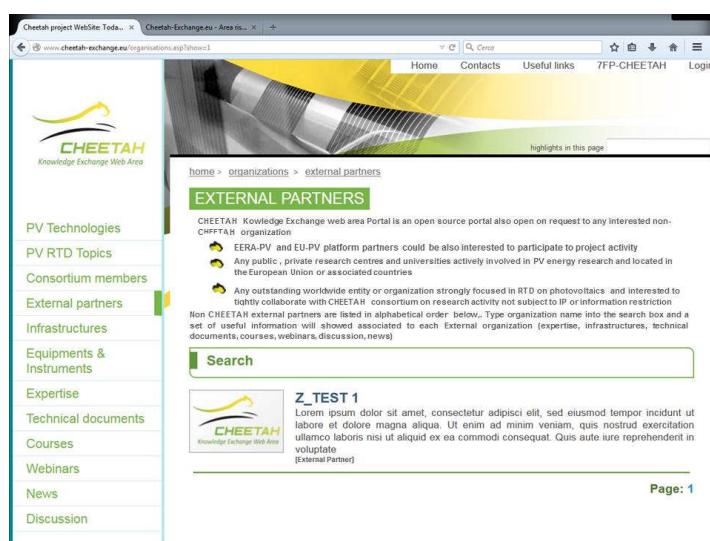


Figure 1. CHEETAH External partners web area

### 3. Reserved area for CHEETAH Partners

Access of the portal to non-CHEETAH partners has imposed that some special areas of CHEETAH KEAP can be reserved to project partners only. In fact :

- Any infrastructure has a specific box that can be utilized to include reserved information (infrastructure reserved area) For instance, info concerning maintenance, or some relevant results or information related to the project management
- Any document, photo, figure, graph can have access limited to CHEETAH partners only
- Any poll or questionnaire can have public or private access

Access to reserved area is offered by a registration procedure/user name (email) /password and two or more different access right level can be arranged depending from the project necessities to protect access to the information. Registration procedure offers also opportunity to collect statistic data (role, gender, nationality, etc) on registered user and procedure includes also the opportunity to recover forgotten password.

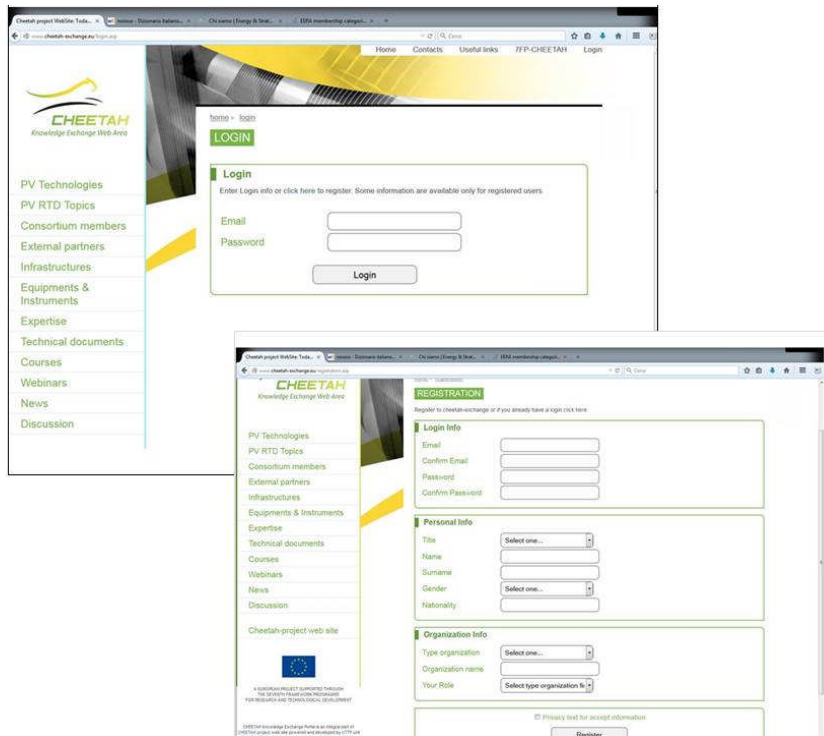


Figure 2. Log-in and registration pages for CHEETAH and non-CHEETAH members

#### 4. CHEETAH Webinar web pages

FP7-SOPHIA e-learning platform SOPHi@WEbinar has been further implemented and was definitively moved to CHEETAH project from 1<sup>st</sup> of February 2015 onwards. This platform will propose webinar very soon and for the first time, it will be also propose on-line live experiments: Scientists/researchers operating in a test site or by equipment can interact live with other researchers interested in the characterization/measurements.

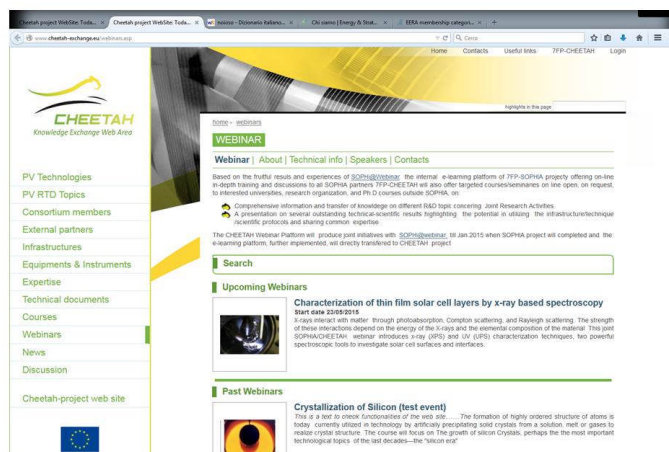


Figure 3. CHEETAH Webinar web pages

## 5. POLL & QUESTIONNAIRES

A new function has been introduced to speed up poll & questionnaires' submission to CHEETAH/non CHEETAH partners concerning, as example, survey on short/medium/long term PV RTD strategies, availability of infrastructures/equipment/expertise, collection of data/information/data base, etc. The poll & questionnaire procedure offers opportunity to collect and elaborate automatically data/feedback on line by several categories of formats for questions :

- Free text
- Simple question (yes/no, low/high, etc. radio" text )
- Check boxes: multiple or single answer
- Windows drop down menu
- Multitasking column/row questionnaires

The Poll/questionnaires can be elaborated in short time just by selecting the list of questions to be submitted to respondents and the offered answer options by offering the opportunity to directly carry out the survey on line. The elaboration of the information and its storage is automatically managed by on line procedures allowing time saving .

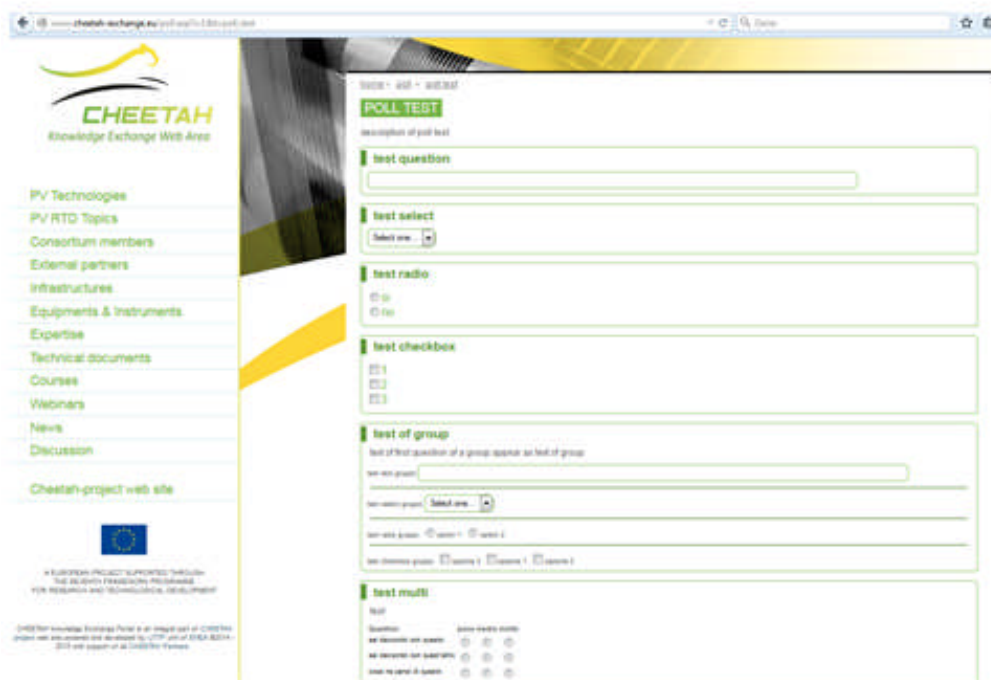


Figure 4. Typical pool test can be proposed by CHEETAH KEAP