

**Skybelt Project**  
**9<sup>th</sup> Project Meeting (hybrid mode)**  
**15<sup>th</sup>-20<sup>th</sup> September 2022**  
**CMU and NU, Thailand**

**Minutes from the 1<sup>st</sup> day of the 9<sup>th</sup> Project Meeting**

15 September 2022

**Present:**

UTEC: Luca Cioccolanti, Matteo Moglie, Marco Arnesano

CU: Halime Paksoy, Gulfeza Kardas

UNN: Khamid Mahkamov, Irina Makhkamova

BJUT: Chao Chen (remotely)

LZJTU: Yong Guan (remotely)

UPM: Ermira Abdullah, Syamimi Saadon, Suhaidi Shafie, Haslina Jaafar

NU: Kwanchai Kraitong

CMU: Wongkot Wongsapai, Chatchawan Chaichana, Det Damrongsak, Yuttana Mona

USM: Mohamad Yusof Idroas, Teoh Yew Heng, Mohd Azmier, Muhamad Azman Miskam

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**1 Morning session**

The meeting starts at 9.00 with the welcome by Prof. Wongkot Wongsapai.

Prof. Det Damrongsak presents the progresses at CMU regarding WP2 and WP4. Subsequently, Prof. Mohamad Yusof Idoras and Dr. Teoh Yew Heng illustrates the progresses at USM and also provide details regarding the status of the tendering progress. The same does Dr Ermira Abdullah regarding the activities and the tendering procedure at UPM. It is expected that the equipment will arrive in few weeks at their premises: PV system, FC system and heat pump will be provided by the supplier in 2-3 weeks while the ORC system will be installed 2-3 weeks later.

It is agreed with the coordinator Prof. Cioccolanti the time for the distribution of the second prefinancing to their institution in order to avoid any difficulties in attending the subsequent meeting since the amount of the first prefinancing will be almost entirely used for the purchase of the equipment.

**2. Afternoon session**

In the afternoon PhD students at CMU present their research activities to the members of the consortium. EU mentors are assigned to some PhD students who are invited to be in touch with them for further supervision and exchange.

Then, Prof. Marco Arnesano provide a seminar on 'Innovative methodologies for buildings performance measurement and assessment' and questions arise from the audience regarding the accuracy of some indexes. The meeting ends at 17.00.



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## Minutes from the 2<sup>nd</sup> day of the 9<sup>th</sup> Project Meeting

16 September 2022

### Present:

UTEC: Luca Cioccolanti, Matteo Moglie, Marco Arnesano

CU: Halime Paksoy, Gulfeza Kardas

UNN: Khamid Mahkamov, Irina Makhkamova

BJUT: Chao Chen (remotely)

LZJTU: Yong Guan (remotely)

UPM: Ermira Abdullah, Syamimi Saadon, Suhaidi Shafie, Haslina Jaafar

NU: Kwanchai Kraitong

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USM: Mohamad Yusof Idroas, Teoh Yew Heng, Mohd Azmier, Muhamad Azman Miskam

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### 1 Morning session

Delegates arrive at CMU. Assoc. Prof. Chatchawan Chaichana who was in charge for the purchase of the equipment at CMU presents the details of the equipment purchased at CMU and yet installed in their labs. Furthermore, it is commented on the modernised modules and related students that will benefit from the use of these equipment.

Proof of the operation of the purchased equipment is provided. Delegates visit the labs in which the equipment are located.

Then Prof. Khamid Mahkamov present the QA procedure in place in EU Universities to staff members of CMU. Opinions are shared on the benefits of some approaches.

### 2. Afternoon session

In the afternoon a workshop on 'Advancement on Renewable Energy Sources' is held presenting the research in place in some universities of the consortium in the field. Industrial partners of the consortium were invited and Dr Thanad Kedpradit from MD of Engineo and XXX from other Departments at CMU talk about their activities.

Questions arise and discussion about different technical solutions is going on.

The afternoon session end at 16.00.



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## Minutes from the 3<sup>rd</sup> day of the 9<sup>th</sup> Project Meeting

17 September 2022

### Present:

UTEC: Luca Cioccolanti, Matteo Moglie, Marco Arnesano

CU: Halime Paksoy, Gulfeza Kardas

UNN: Khamid Mahkamov, Irina Makhkamova

BJUT: Chao Chen (remotely)

LZJTU: Yong Guan (remotely)

UPM: Ermira Abdullah, Syamimi Saadon, Suhaidi Shafie, Haslina Jaafar

NU: Kwanchai Kraitong

CMU: Wongkot Wongsapai, Chatchawan Chaichana, Det Damrongsak, Yuttana Mona

USM: Mohamad Yusof Idroas, Teoh Yew Heng, Mohd Azmier, Muhamad Azman Miskam

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### 1 Morning session

Delegates arrive at the faculty of Engineering in CMU and then together with the staff members at CMU move to the Biomass Management Center. The activities of the Center are illustrated and the contribution in the sustainability of the university campus is detailed.

After lunch, the biomass project in CMU is discussed and opinions shared regarding the technical solutions implemented.



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## Minutes from the 5<sup>th</sup> day of the 9<sup>th</sup> Project Meeting

19 September 2022

### Present:

UTEC: Luca Cioccolanti, Matteo Moglie, Marco Arnesano

CU: Halime Paksoy, Gulfeza Kardas

UNN: Khamid Mahkamov, Irina Makhkamova

BJUT: Chao Chen (remotely)

LZJTU: Yong Guan (remotely)

UPM: Ermira Abdullah, Syamimi Saadon, Suhaidi Shafie, Haslina Jaafar

NU: Kwanchai Kraitong

CMU: Wongkot Wongsapai, Chatchawan Chaichana, Det Damrongsak, Yuttana Mona

USM: Mohamad Yusof Idroas, Teoh Yew Heng, Mohd Azmier, Muhamad Azman Miskam

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### 1 Morning session

Participants arrive at the Engineering Faculty of Naresuan University and are welcomed by Prof. Kraitong Kwanchai, team leader of Skybelt project at NU.

Prof. Kwanchai reports on the progresses at NU and details the status of the tendering procedure in his institution to all the participants. The equipment is not yet been purchased since the two tendering procedures previously launched failed because of the poor reliability of the winning supplier. Eventually, the third tentative was successful and the supplier selected. The equipment is expected to be installed at the premises of Naresuan University by the mid of January.

In the late morning also two PhD students at NU present their research activity to the members of the consortium.

### 2. Afternoon session

Workshop on innovative renewable energy technologies for residential applications is held in the afternoon. Students at the Mechanical Department of the Faculty of Engineering have been invited and about 40 attend the meeting. EU Professors of the Skybelt consortium present the recent advancement on some renewable energy technologies according to the agenda of the workshop.

The afternoon session ends at 16.30.



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## Minutes from the 6<sup>th</sup> day of the 9<sup>th</sup> Project Meeting

20th September 2022

### Present:

UTEC: Luca Cioccolanti, Matteo Moglie, Marco Arnesano

CU: Halime Paksoy, Gulfeza Kardas

UNN: Khamid Mahkamov, Irina Makhkamova

BJUT: Chao Chen (remotely)

LZJTU: Yong Guan (remotely)

UPM: Ermira Abdullah, Syamimi Saadon, Suhaidi Shafie, Haslina Jaafar

NU: Kwanchai Kraitong

CMU: Wongkot Wongsapai, Chatchawan Chaichana, Det Damrongsak, Yuttana Mona

USM: Mohamad Yusof Idroas, Teoh Yew Heng, Mohd Azmier, Muhamad Azman Miskam

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### 1 Morning session

Participants arrive at NU. Then delegates move to the School of Renewable Energy and Smart Grid Technology of Naresuan University visiting the labs. Researchers at the School present the recent progresses of their research activities and their future plans. Opinions are shared on the potential of some technologies based on the different context between EU and Thailand.

Subsequently all the participants move to a nearby building where the advanced building management system implemented in the campus is presented. Questions arise on the potential of the platform and the possibility of further customising the control panel and the parameters under monitoring.

Eventually, delegates come back to the meeting room where Prof. Paksoy summarise the progresses on WP4 also on the basis of the PhD interviews during the visit at CMU and NU.

### 2. Afternoon session

In the afternoon, Prof. Mahkamov provides a short seminar on QA to some staff members at NU to further familiarise with EU standards.

Then, Prof. Cioccolanti discusses about the progresses and the criticalities on WP5 by remarking the urgency in finalising in short time the purchase of equipment in all the University in order to use the equipment in the modernised modules of the Skybelt project in this new academic year.

Then, the members of the consortium discuss about dates of next meeting. It is agreed that next meeting will be held in Malaysia from 4<sup>th</sup> to 9<sup>th</sup> January 2023 combining the visit to both UPM and USM. Then, it is discussed also potential dates for the forthcoming meetings. It is agreed to have the subsequent meeting in May in Cukurova University and sometimes in July in Northumbria University. Based on the news coming from China it will be evaluated the possibility to have a project meeting also in China in both Universities of the consortium in September/October 2023.



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