



The Standards People

ETSI Research Conference 2023

Maximizing the Impact of European 6G
Research through Standardization

BeGREEN Standardization Dissemination Plan

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1. Project Overview

BeGREEN:

Beyond 5G Artificial Intelligence Assisted Energy Efficient Open Radio Access Network

- **Project website:** www.sns-begreen.com (online soon)
- **Twitter:** @SNS_BeGREEN
- **LinkedIn:** <https://www.linkedin.com/in/sns-begreen-project-613259250/>

- **Stream A 01-01 'Green Radio' call**
- **Partners:**



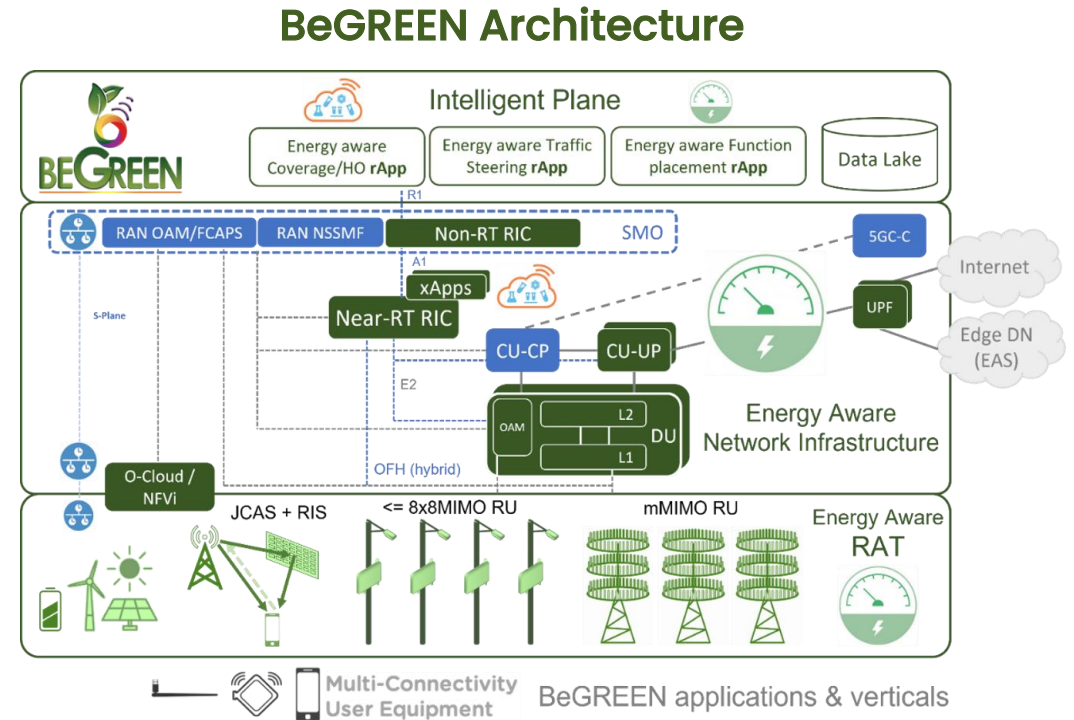
2. Technical Information

- **Project Key Objectives:**

- Planning and evaluation of a **reference massive MIMO architecture** to achieve **Energy Efficient connectivity, proper spectrum resource allocation, optimized resource allocation, and balance of energy transmission and interference mitigation**
- **RU/DU/CU energy consumption optimization** by means of an **offloading engine, rApp based RU controlling scheme, AI-based DPD and envelope tracking, and CU-UP PDCP HW acceleration**
- **Network functions and mobile edge services energy optimization** by means of an **ORAN based Intelligent Plane, AI-assisted rApps and xApps, explainable AI and federated learning approaches**

- **Use Case demonstrations:**

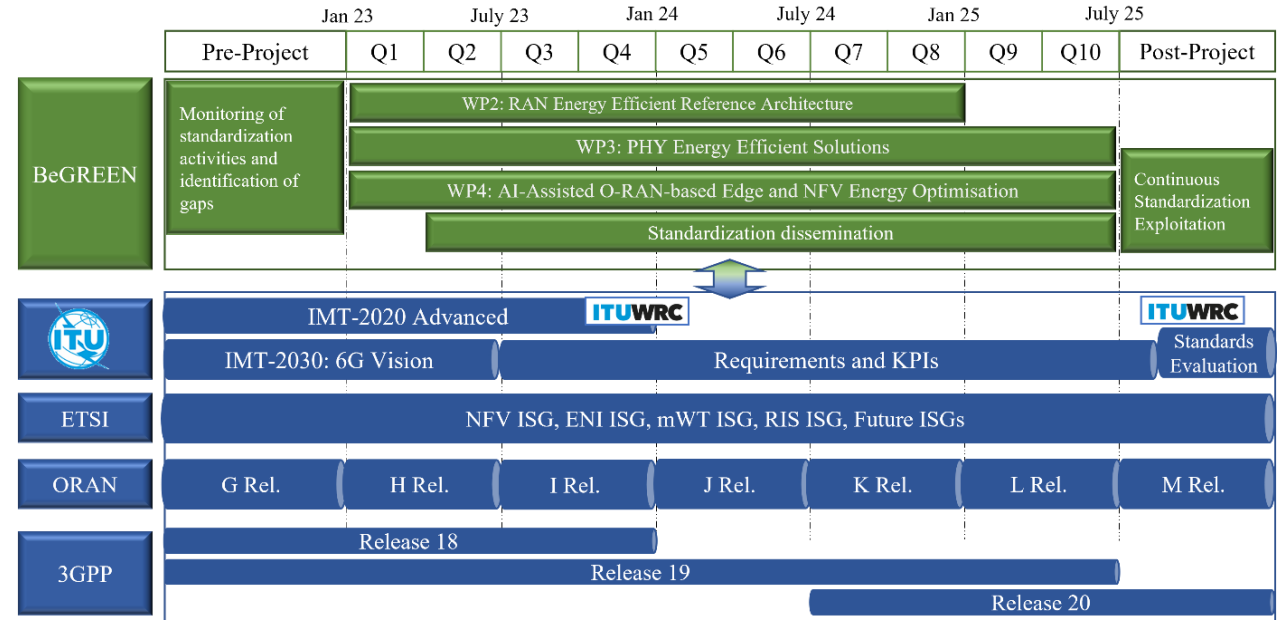
- **BeGREEN's solutions and innovations will be implemented and demonstrated in an E2E scenario in BT Adastral Park Test bed in Ipswich, UK**



3. Planned Standardization Activities

- **BeGREEN** standardization activities primarily constitute three tasks, namely,
 - I. the formation and operation of a **Standardization Advisory Committee (SAC)**;
 - II. the creation and update of a **Standardization Roadmap**; and
 - III. the dissemination, through contributions, of BeGREEN technologies and findings into the relevant standardization development organizations (SDOs).

- The SAC will be responsible for,
 - a) setting up the standardization activity roadmap within a few months from project kick-off and continuing to update this roadmap as the work in the project and these SDOs progress,
 - b) coordinating the project and standardization groups through constant monitoring of activities and regular conference calls with standardization experts,
 - c) seizing opportunities to push contributions into ongoing specifications,
 - d) coordinating with standardization experts to draft contributions ahead of standard meetings, and
 - e) continuously promoting the project at standardization-related workshops, panels, and summits.



- BeGREEN consortium has gone through **initial identification of the relevant SDO activities** to the project technical innovations
- The **standardization contribution diagram will be updated** to include detailed project's milestones on the innovation development and corresponding work items in the standardization activities above
- Project's SAC will monitor other SDOs and possible work items to find **any related opportunity for impact creation**

4. Planned Standardization Activities

- ❑ **BeGREEN partners** have a very strong footprint in the **standardization bodies**, and so the project is in the best position to impact SDOs, leveraging the great experience and on-going activities of some of the consortium partners.
- ❑ A **preliminary plan** on the **'standards impact strategy'** was drafted during the **proposal preparations** by partners involved in the SDP activities
- ❑ **BeGREEN SAC** will prepare a detailed **roadmap** based on this preliminary ideas in the coming weeks

SDO	Relevant Activity/ Target	Partner
3GPP RAN1	Active involvement in the 3GPP Release 18 study item on Network Energy savings.	BT
O-RAN WG1	Active participation and submissions, use case submissions in parallel with TIP activities.	PW, BT, ACC
O-RAN WG2	Active participation and submissions, E2 interface requirements – providing BeGREEN inputs alongside O-RAN MVP-C group outputs from Energy Efficiency candidate feature	PW, BT, ACC
O-RAN WG3	Active participation and submissions, A1 interface requirements	PW, BT, ACC
SCF	Submission of energy efficiency use case requirements into neutral host definitions as part of neutral host architecture definitions.	BT
ETSI	Submission to ETSI ISG RIS group of use cases and requirements for assessing energy efficiency in future RIS deployment standards.	NEC, BT
TIP	As a co-lead of the TIP Project on RAN Intelligence and Automation (RIA), BT will submit use cases and requirements developed through BeGREEN into O-RAN.	BT

BeGREEN partners are involved in relevant SDO activities, e.g., 3GPP, ETSI, O-RAN, Small Cell Forum (SCF), and Telecom Infra Project (TIP)
 (the list is not exhaustive and subject to update)



External Advisory Board

BeGREEN project management would like to take this opportunity to invite experts involved in ETSI and other SDOs activities in the project's 'External Advisory Board' (EAB)!

You will be welcome in the project EAB meetings, the consortium will present detailed project's technical progress and plans and would be happy to hear your advice on any technical matter, including standardization contributions!



Thank you!

sns-begreen.com (to be online soon)

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