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# TELE-POCUS-6G

## Tele-POCUS over future 6G networks

*Clinical use cases, connectivity requirements, and implementation barriers in primary care*

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*Seeking a clinical-validation role in a FEM-led consortium for HORIZON-JU-SNS-2026-FEM*

# A clinical team with ready-to-deploy POCUS assets

We are the Family Medicine team at Izmir University of Economics (IUE), led by Assoc. Prof. Dr. Özden Gökdemir.

Our group works at the intersection of primary-care practice, ultrasound education, and digital health.

We complement telecom and FEM engineering teams by bringing what many technical consortia need: a credible clinical channel, real end-user evidence, and a use case with measurable societal impact.

## Ready

POCUS survey instrument, ethics-aligned, deployable across consortium sites

## Mapped

Clinical workflow knowledge in primary, rural, and emergency-triage settings

## Reachable

Family-physician end-user network for requirements, pilots, and validation

THE CLINICAL GAP

# POCUS is powerful — but adoption in primary care is uneven

Family physicians could use Point-of-Care Ultrasound (POCUS) in selected high-value scenarios — triage, rural emergencies, obstetric and abdominal assessment, and procedural guidance.

### 1 Training & certification

Limited residency exposure; uneven certification pathways across countries.

### 2 Equipment access

Portable devices exist, but rarely reach rural and small primary-care clinics.

### 3 Scan confidence

Without remote mentoring, less-experienced clinicians hesitate to act on findings.

### 4 Connectivity for remote support

Current connectivity may be insufficient for reliable live imaging and remote mentoring in rural, mobile, or resource-limited settings.

*Connectivity is the barrier engineers can move — and the one this call is built for.*

# Tele-POCUS is a vertical-pull use case for next-gen FEM hardware

Portable, battery-driven, tele-mentored ultrasound at primary-care scale is one of the most demanding real-world workloads for future mobile networks. Making it routine requires exactly what HORIZON-JU-SNS-2026-FEM is designed to deliver.

*A clinically validated tele-POCUS scenario gives the consortium a concrete, evaluable end-user impact story — and gives FEM designers a measurable, peer-reviewed target.*

## Vertical pull: clinic → FEM

1. Family physician needs portable tele-POCUS
2. Device streams imaging + receives remote guidance
3. Demands new RF performance envelope
4. Drives FEM design: uplink, latency, power, coverage

**Aligned with:** 6G hardware sovereignty · Digital health · Rural service equity · Chips JU complementarity

# What tele-POCUS demands from your front-end

↑

## High uplink throughput

Live B-mode imaging plus AI-assist features stream from clinic to expert in real time.

ms

## Ultra-low latency

Real-time remote mentoring and guided scanning need sub-frame, jitter-bounded round trips.

W

## Energy efficiency

All-day handheld and wearable POCUS devices need RF chains that don't drain the battery.

%

## Reliable coverage

mmWave / sub-THz performance must hold up in rural clinics, mobile units, and ambulances.

*These KPIs are what our team helps define, refine, and validate with real end-users.*

WHAT WE BRING

# Concrete, existing assets — not a wish list

01

## Survey instrument

Web-based, anonymous, cross-sectional survey on POCUS use among family physicians. Ethics-ready for multi-country deployment.

02

## End-user network

Reachable family-physician community for requirement elicitation, focus groups, and pilot recruitment in primary-care settings.

03

## Clinical workflow expertise

Translation of imaging, decision-support, and tele-mentoring needs into clinical KPIs that feed FEM and system design.

04

## Pilot-site access

Primary-care environments where 6G-enabled devices can be tested with real end-users under realistic conditions.

05

## Dissemination reach

Channels into family-medicine and primary-care networks across Europe — useful for impact, exploitation, and policy uptake.

06

## Handheld POCUS readiness

Practical experience with handheld POCUS workflows, including Butterfly iQ+ access for preliminary scenario development, workflow prototyping, and user-requirement mapping.

# Our work package: 6G tele-POCUS — end-user requirements & validation

| | | |
|---|---|---|
| T1 | **Cross-country survey** | Deploy POCUS survey across consortium clinical sites; quantify use, gaps, and connectivity barriers. |
| T2 | **Use-case catalogue & KPIs** | Translate clinical scenarios into measurable connectivity, latency, and reliability requirements. |
| T3 | **Pilot protocol & ethics** | Ethics packages, device-use procedures, and data-protection workflows for tele-POCUS field testing. |
| T4 | **End-user validation** | Run acceptability assessments and integrate findings into clinical workflows. |
| T5 | **Policy & training pathway** | Recommend certification and policy steps so the technology actually reaches primary care. |

Our position

**Clinical / end-user / healthcare validation partner.**

We do not lead FEM hardware development. We close the gap between RF performance gains and evaluable clinical impact — which is exactly where many strong technical proposals lose points.

LET'S BUILD A CONSORTIUM

# Partners we're looking for

### FEM coordinator

University or RTO leading FEM / RF front-end research and proposal coordination.

### RF / FEM industry

Hardware partners on RF front-end modules, mmWave / sub-THz components, integration & packaging.

### Portable Ultrasound / Digital Health Partner

Partner able to provide handheld ultrasound devices, software/platform access, technical support, or in-kind pilot equipment contribution for clinical validation.

### Tele-medicine platform

Provider of secure clinical streaming, edge AI assist, and tele-mentoring software.

### 6G testbed / operator

Network operator or 6G testbed willing to host primary-care pilots and rural deployments.

### Pilot infrastructure sought

Project-supported handheld ultrasound devices, tele-POCUS platform access, connectivity testbed access, and technical support for structured clinical validation.


Talk to us

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