

SPB – WD1

status and activity plan

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WD1: Physical Variables and Characterization

What we expect, in a few words:

- Definition of the **needed physical variables** for the site characterization and for their possible impact on the detector performances (*link with ISB*);
- Definition of **surface and underground** (and/or borehole) accurate **noise measurements**, with procedures and standards;
- **Coordination of the measurements campaigns** at the candidate sites (ongoing and planned) → *interaction with the host teams* to have comparable long/short-term, active/passive measurements;
- Definition of **standard data formats**, repository and (open) **analysis tools**.

WD1: Physical Variables and Characterization

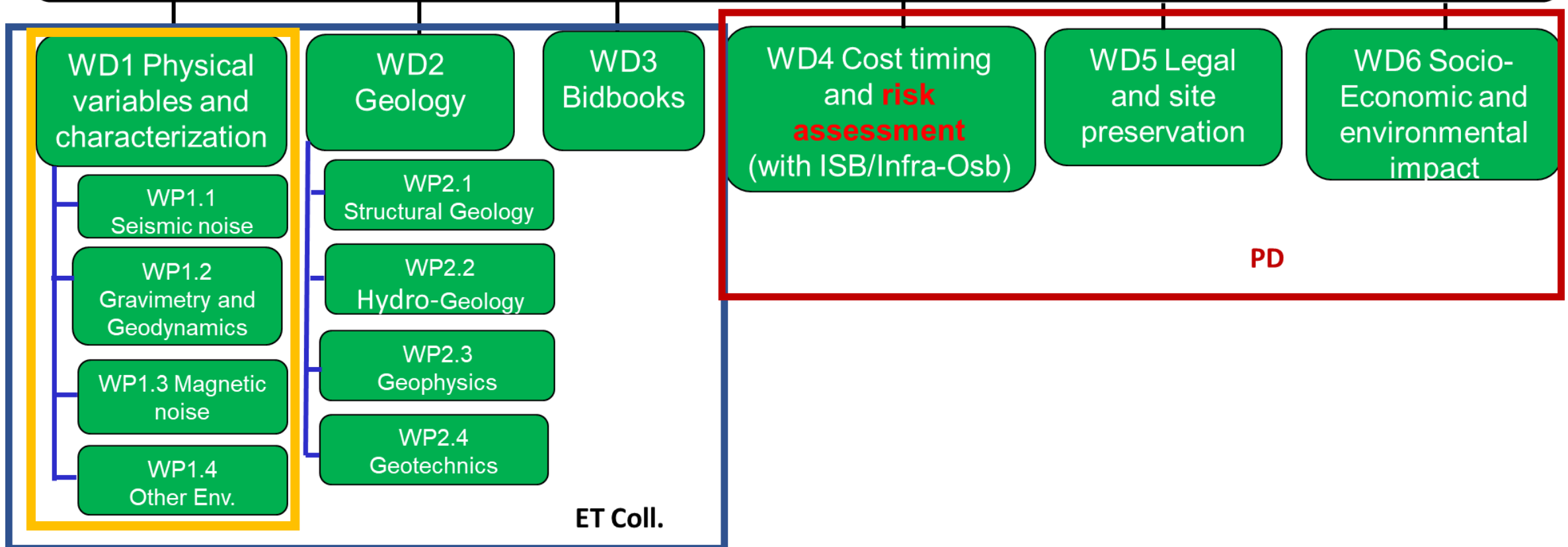
Interaction with the host teams is crucial:

- Sharing of best practices and indications between the host teams for the measurements (setup, instrumentation, data taking...);
- Exchange of experience between host teams;
- Data sharing (common format, analysis tools...).

WD1: Physical Variables and Characterization

Division structure within the SPB WBS:

Site Characterization/Preparation Board



WP 1.1 – Seismic Noise

Chairs:

- Carlo Giunchi – INGV
- Shahar Shani-Kadmiel – KNMI

WP 1.2 – Gravimetry and Geodynamics

Chairs:

- Roberto Devoti – INGV
- TBD

WP 1.3 – Magnetic noise

Chairs:

- Rosario De Rosa – INFN / UniNA
- TBD

WP 1.4 – Other environmental measurements

Chairs:

- Tomasz Bulik – PolGrav
- Shahar Shani-Kadmiel – KNMI

Milestones:

- M1.1: physical variables needed for the site characterization and for the evaluation of their impact on the detector performances;
- M1.2: measurements recommendations and standards (setup, sensors, procedures, best practices...).
- M1.3: data format standards and analysis tools.

Deliverables:

- D1.1: quantification of sources impacting ET performances.

Few remarks:

- Strong interaction with ISB will be needed (e.g. interferometer, suspensions, active noise mitigation...);
 - *actions: joint call ISB-SPB, dedicated session in the ISB workshop at GSSI*
- A wiki page will be setup on the ET wiki ASAP;
- A “paved road” to follow: **Site-selection criteria for the Einstein Telescope**

Cite as: Rev. Sci. Instrum. 91, 094504 (2020); doi: [10.1063/5.0018414](https://doi.org/10.1063/5.0018414)

Submitted: 15 June 2020 • Accepted: 20 August 2020 •

Published Online: 9 September 2020



View Online



Export Citation



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