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WP 3 – Digital receivers

- WP 3.1 – wide-field astronomy
  - development of algorithms: PAF design simulator, Novel beamforming technology, PAF-RFI mitigation, PAF reference implementation
  - software developments : PAF design simulator, Novel beamforming technology on RFSoC, PAF reference implementation
  - hardware developments: Novel beamforming technology on RFSoC (mezzanine-board)
  - facilitate hardware: Novel beamforming technology on RFSoC, Demonstrator
- WP 3.2 – wide-bandwidth astronomy
  - development of algorithms: RFI-Mitigation
  - developments (hard & software): DBBC4 VLBI backend demonstrator, DiFrEnd28 broadband digitizer, Digitizer using passband sampling (with industry collaboration)
  - DBBC4 commercialization via an INAF spin-off company (see next page)
- WP 3.3 – multi-pixel astronomy
  - design studies

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WP 3.2 –wide bandwidth astronomy spin-off

- HAT Lab founded in 2009 as INAF spin-off company
  - provides a commercial hub from which standardized VLBI equipment and components can be purchased by the observatories
  - addresses common issues of research projects:
    - missing long-term support
    - (mass) production beyond the research project funding life-time
  - previous backend models (DBBC2 and DBBC3) were successfully made available to observatories through this industry cooperation over a period of more than 15 years with a continued development effort to enhance the equipment capabilities
  - The DBBC4 backend system developed as part of the WP 3.2 will be commercially marketed by HatLab.