tasks in wp12
and nominated task leaders

- **Task 12.1. Coordination and Communication** (CERN, DESY)
  - G.A. Stewart, F. Gaede

- **Task 12.2. Turnkey Software** (DESY, CERN, INFN-PI, INFN-PD, INFN-BA, INFN-BO, IHEP, SDU)
  - Turnkey Software Stack, for physics and performance studies, EDM4hep, PODIO and Digitisation toolkit
  - R&D study on frameworks to manage heterogeneous resources
  - T. Madlener

- **Task 12.3. Simulation** (CERN, DESY, CNRS-IJCLab, UNIMAN)
  - Fast simulation techniques integrated into Geant4
  - Machine learning based calorimeter simulation toolkit for training and inference
  - W. Pokorski (A. Zaborowska)

- **Task 12.4. Track Reconstruction** (CNRS-IJCLab, CERN, DESY, INFN-FE, INFN-BO)
  - complete track reconstruction with ACTS composable algorithms and for heterogeneous computing
  - Machine learning reconstruction algorithm for MPGD detectors
  - H. Grasland

- **Task 12.5. Particle Flow Reconstruction** (UWAR, CERN, INFN-RM3, CNRS-LLR, CNRS-IP2I, UOS)
  - PFA algorithms for DUNE and dual-readout calorimeters, APRIL PFA for hadronic jets
  - J. Back (J. Marshal)

*leave it open to task leaders to nominate a co-task leader to share the work*
# Deliverables and Milestones in WP12

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Title</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>D12.1</td>
<td>Turnkey Software Stack (Key4hep)</td>
<td>46</td>
</tr>
<tr>
<td>D12.2</td>
<td>Fast shower simulation in Geant4</td>
<td>45</td>
</tr>
<tr>
<td>D12.3</td>
<td>ACTS tracking algorithms</td>
<td>43</td>
</tr>
<tr>
<td>D12.4</td>
<td>PFA reconstruction</td>
<td>45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Title</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS48</td>
<td>LC reconstruction prototype in Key4hep</td>
<td>Reproduce similar detector performance as achieved with the current framework</td>
</tr>
<tr>
<td>MS49</td>
<td>Prototype of ML based shower simulation</td>
<td>Runnable example code that simulates part of the showers with ML algorithms</td>
</tr>
<tr>
<td>MS50</td>
<td>ACTS tracking algorithm prototypes</td>
<td>Runnable test cases which demonstrate algorithm functionality on benchmark data from TrackML</td>
</tr>
<tr>
<td>MS51</td>
<td>New PFS prototypes</td>
<td>Runnable test cases which demonstrate algorithm functionality on benchmark data</td>
</tr>
</tbody>
</table>
Goals for today

- round table through our tasks
  - scientific progress
  - hiring
  - …
- decide how we would like to organise the work in WP12 over the next four years
  - proposal from last time was slightly ambiguous:
    - general meetings every 8 or 4 weeks?
    - probably 8 weeks more suitable!

Proposal from kick-off:
- identify a suitable monthly (every 4 weeks) time slot (1-2 h)
  - use for WP12 round the table meetings
  - interleaved w/ task meetings (where needed)