

# Energistics University

## Program

| #  | Topic   | Content   |                                     |
|----|---|---|-------------------------------------|
| 00 | <b>Introduction and program overview</b>              | Program overview, intended audience, overview of main segments                                    | Intro                               |
| 01 | <b>The standards: one for all, all for one</b>        | Standards built on a common architecture, driven by expert groups (SIGs)                          |                                     |
| 02 | <b>Lifecycle of a standard</b>                        | The collaborative process to define, develop and finalize a new version                           |                                     |
| 03 | <b>XML, JSON and other formats</b>                    | The choice of the right format for data exchange, now and in the future                           |                                     |
| 04 |   |   |                                     |
| 05 | <b>Overview of the Energistics data standards</b>     | What data domain is covered by each of the three data standards                                   | The Data Standards                  |
| 06 | <b>WITSML standard for real-time drilling</b>         | Remote monitoring of drilling operations to reduce staff on location                              |                                     |
| 07 | <b>WITSML standard for drilling and well data</b>     | Drilling and well data applied to collaborative and analytical workflows                          |                                     |
| 08 |   |   |                                     |
| 09 | <b>RESQML standard for subsurface &amp; reservoir</b> | Supporting multi-vendor, multi-platform projects and workflows for geoscience and engineering     |                                     |
| 10 | <b>RESQML standard for evergreen archiving</b>        | Managing multiple versions of reservoirs over the life-of-field cycle                             |                                     |
| 11 |   |   |                                     |
| 12 | <b>PRODML standard for production</b>                 | Facilitating the aggregation and sharing of production results and tests                          |                                     |
| 13 | <b>PRODML standard for DAS</b>                        | Managing petabyte-sized fiber optic sensing measurements  |                                     |
| 14 |   |   |                                     |
| 15 | <b>Data transfer overview</b>                         | The challenges of moving data in the upstream industry's diverse IT ecosystems                    | Transfer & Packaging                |
| 16 | <b>ETP for real-time data streaming</b>               | Streaming data from an instrument (e.g. LWD) to a viewer / recorder application                   |                                     |
| 17 | <b>ETP for application interoperability</b>           | File-free data movements and automated sharing of new data  |                                     |
| 18 | <b>EPC to package very large data</b>                 | Conventions to create, store, move and read large and complex datasets                            |                                     |
| 19 |   |   |                                     |
| 20 | <b>Common Technical standards</b>                     | An overview of standards applicable to all Energistics data schemas                               | Common Technical Standards          |
| 21 | <b>The Energy Industry Profile - EIP</b>              | Codifying the "data about data" for upstream energy   |                                     |
| 22 | <b>Quality Assurance</b>                              | Build trust in data by capturing data assurance processes and attaching their outcome to the data |                                     |
| 23 | <b>Units of Measure</b>                               | A single place to define all UoMs for upstream energy   |                                     |
| 24 | <b>PWLS</b>   | Making sense of thousands of common labels for data types related to borehole measurements        |                                     |
| 25 | <b>Develop software using standards</b>               | Tools, resources and examples to build applications using Energistics standards                   | Development & third-party standards |
| 26 | <b>Energistics standards in OSDU platform</b>         | Data schemas, data loaders and APIs   |                                     |
| 27 |   |   |                                     |
| 28 | <b>Deploying Standards in your organization</b>       | Charting a course to adopt data exchange standards and reap the benefits                          |                                     |
| 29 |   |   |                                     |
| 30 |   |   |                                     |