what forecasters and researchers can learn from each other when working together in one room

organized in cooperation with:

supported by:

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Photos courtesy of Magdalena Pichler, Lucia Sokolová, Alois M. Holzer
The concept

• bring *forecasters* and *researchers* together to evaluate new forecast-supporting products

• participants take part for one week on-site and/or join online sessions
The products

- products include NWP-, radar-, satellite- and remote sensing products

Examples:
- COSMO-DE Ensemble Prediction System (DWD) visualizations
- Satellite-sounder based NearCasts (Univ. Wisconsin)
- GLD-360 lightning detection system (VAISALA)
- Mesocyclone Detection Algorithm (DWD)
- OPERA European Radar Composite (EUMETNET)
The procedure

1. Participants jointly make forecasts and nowcasts

2. Forecasts are verified against observations

3. Products are evaluated (Discussion, Testbed Blog*, and Questionnaires)

* new in 2013

Forecast for the next day (coloured lines) with verification data (symbols reflect severe weather reports, magenta = lightning).
Participants

Average grade given by participants on a scale from 1 (terrible) to 10 (fantastic):

2012: 8.6
2013: 8.647727.... 😊

Testbeds 2012 and 2013 total:

108 unique on-site participants from 26 countries

A limited number of NHMS forecasters can additionally take part in the online-sessions only through EUMETCAL.
Testbed Data Interface

- Satellite layer selector
- RADAR composite selector
- NWP field selector

Nowcast Display

- 'mouse-over' time selection
- Domain selector
- Lightning/surface data/mesoscyclone
Red lines indicate where severe weather is forecast in the next 2 hours.

Characters indicate the expected type of severe weather: **Rain**, **Hail**, **Wind**, or **Tornadoes**.

Verification data are small coloured symbols and lightning detections in **magenta**.
Expert lecture

On-site lectures by researchers on lightning detection systems... on supercells... overshooting top detection.

Activity:
A researcher / developer or forecasting expert presents a tool or discusses a forecasting topic.
Product evaluation

Activity:
Discuss product performance and collect feedback in a group discussion, guided by questionnaires for each product.

Record feedback in Testbed Log.

Evaluation discussion lead by Testbed staff.

Evaluation Form

Note: Some questions must be answered daily, some questions only at the end of the week.

Question 1: (To be answered daily) What was the convective regime for today's event (i.e. supercells, mesoscale convective system, squall line, airflow thunderstorms)? Where were the storms located?

Question 2: (To be answered daily) How well were OTs or enhanced-V/Line signatures correctly detected when apparent in visible
Plans for 2014

1. Two periods:
   • 2 – 27 June
   • 6 – 10 October

2. Improved data interface

3. New and improved products to evaluate

4. New Participants!
Participation:
Registration is possible until fully booked
www.essl.org/testbed
Early fee deadline: 20 February 2014

Product evaluation:
Ask me or contact Pieter Groenemeijer
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2 - 27 June,
13-24 October 2014
ESSL Research and Training Centre
Wiener Neustadt, Austria

The 2013 Testbed data can be viewed at:
www.essl.org/testbed/data

The Testbed Blog can be viewed at:
www.essl.org/testbed/data