

Second High Level Forum on GGIM,
4-6 February 2013

Session 3: Developing an Effective Global Geodetic
Reference Framework and
Supporting Location-Based Services

**The Technology Trends, Applications and
Economic Benefits of a Global Reference
Framework**

Stefano Ghielmetti

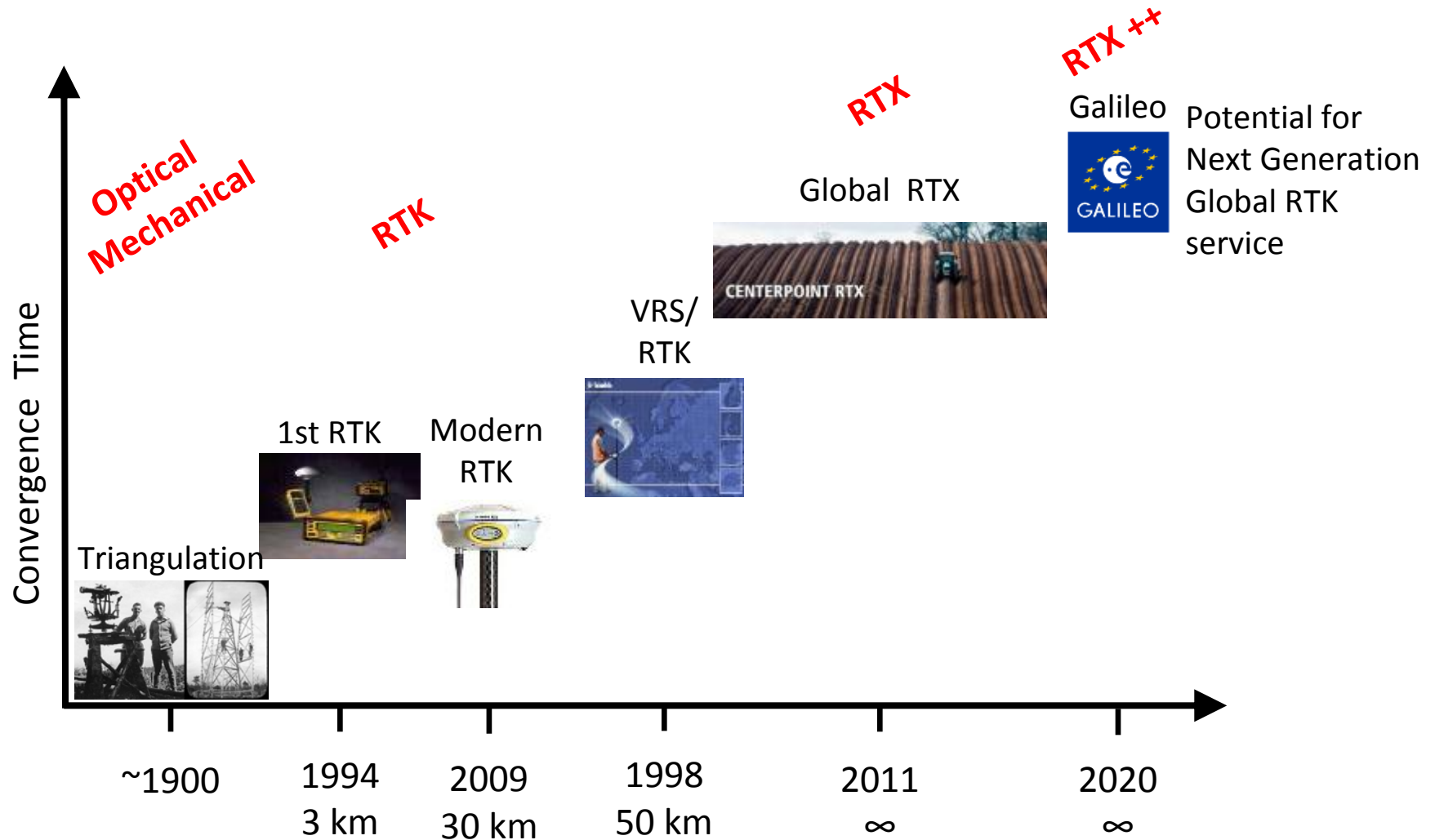
Topics

- Expanding on past resolutions
- Global Reference Framework
 - the latest trends in technologies,
 - applications and
 - economic benefits
- Conversation

2nd SESSION UN COMMITTEE OF EXPERTS on GGIM, New York (2012)

- Report by Shigeru Matsuzaka Chair, PCGIAP Working Group 1: Geodetic Technologies and Applications .
 - Technology
 - Cornerstone of all geospatial measurements
 - National and Regional “Frames”
 - Considerations for Governments
 - What can we do

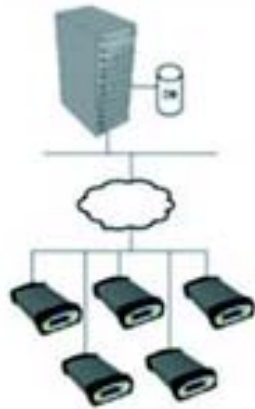
“Positioning” Technologies



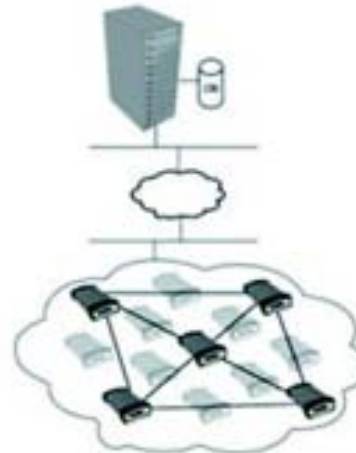
Existing Correction Solutions



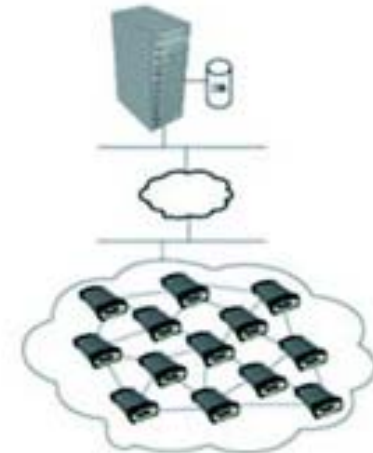
Single BASE/CORS
Trimble NetR9™
GNSS reference receiver



BASE/CORS Array
Trimble Dynamic Control App



SparseVRS Network
Trimble SparseVRS

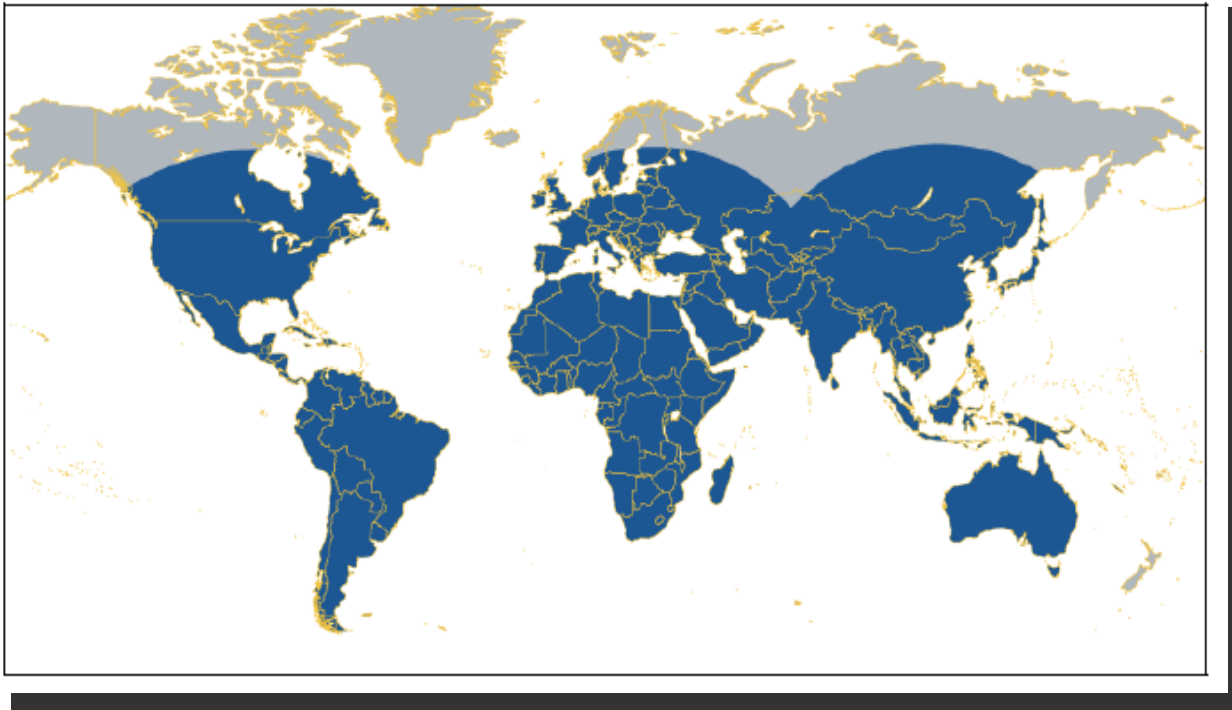


VRS Network
Trimble VRS/Net™ App



Trends

- Trimble[®] CentrePoint[™] RTX[™]
- Launched World-Wide 19 November 2012
'Global' correction service



Trimble[®] CenterPoint[™] RTX[™] – Post Processing



Delivery:

- Post-processed

Benefits:

- Allow users to upload their observation file and receive a corrected position
- Available worldwide
- Free service
- High-accuracy - better than 2cm horizontal accuracy
- GNSS compatibility
- No base station required
- www.TrimbleRTX.com for more info

Trimble CenterPoint RTX: Standard Initialization



Delivery:

- Via Satellite
- Via Cellular



Benefits:

- Available worldwide
- High-accuracy - 3.8 cm* horizontal accuracy.
- Fast initialization - converges to full accuracy in 30 minutes or less.**
- More uptime – Continue working during times of correction signal loss for up to two minutes.
- Fast Restart - Decrease the standard* initialization time to < 5 minutes at the beginning of each day by **starting your tool in the same place you shut it off the night before.**
- No base station required.

Trimble CenterPoint RTX: 1-Minute Initialization



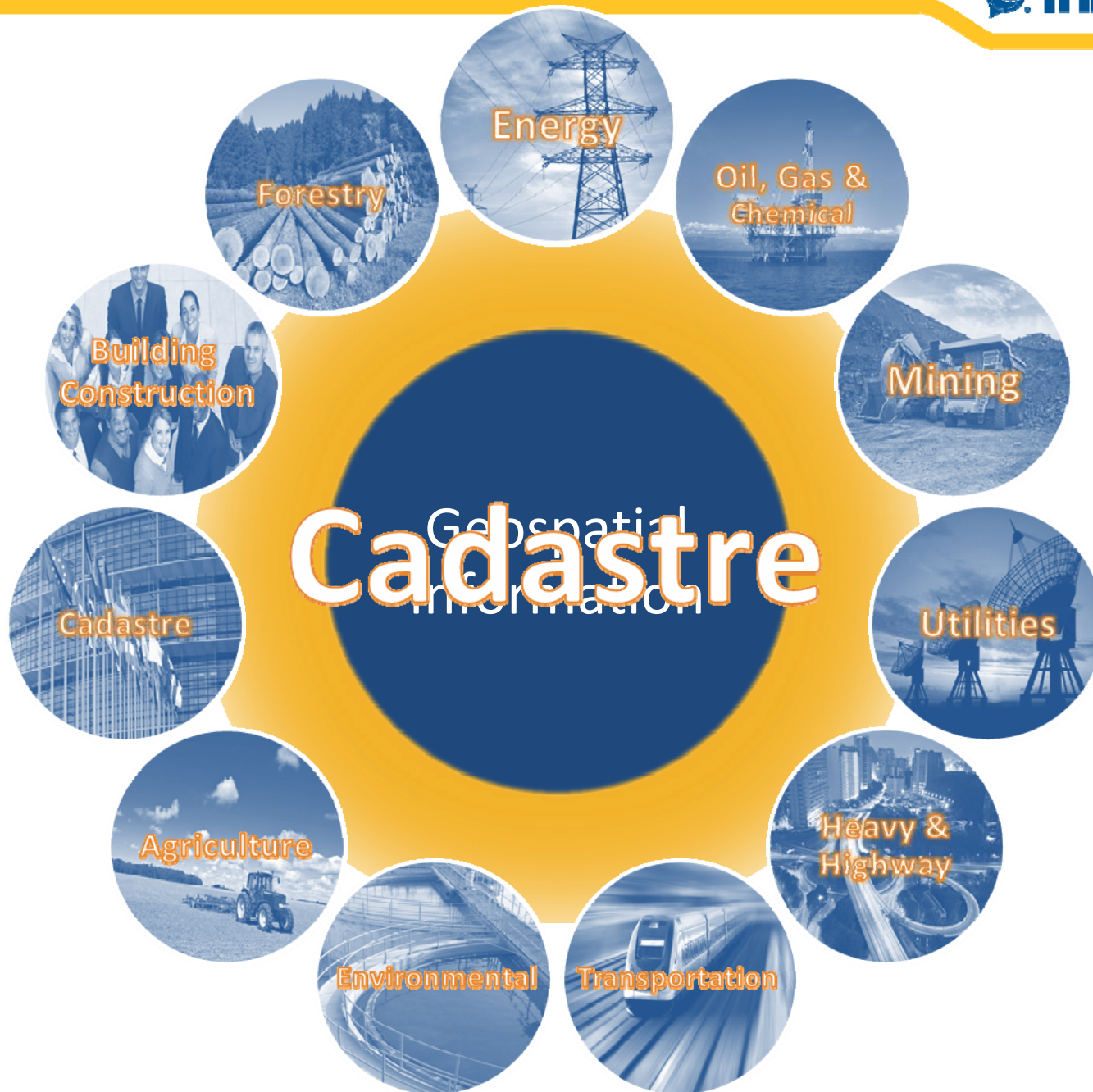
Delivery:

- Via Satellite

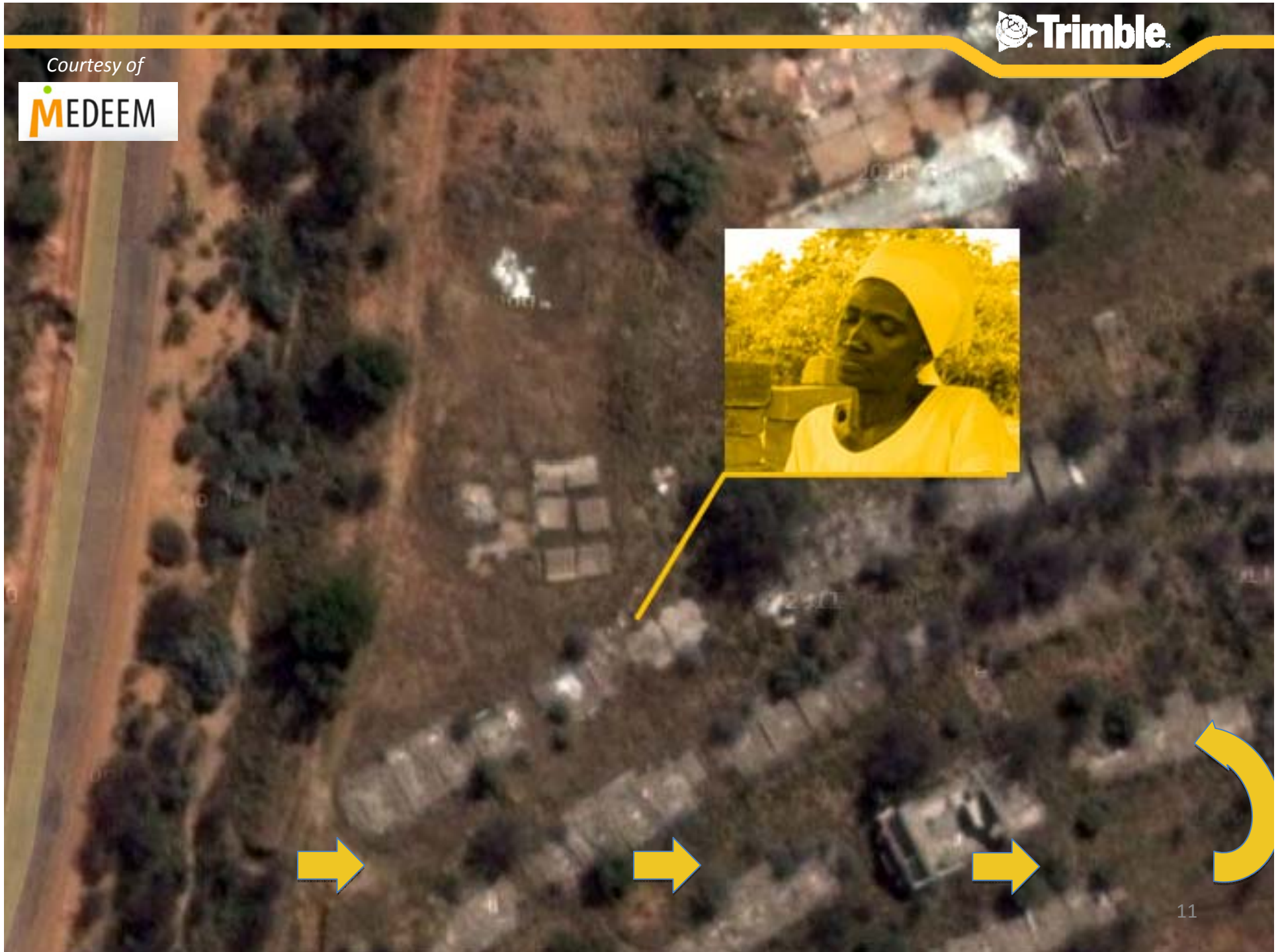


Benefits:

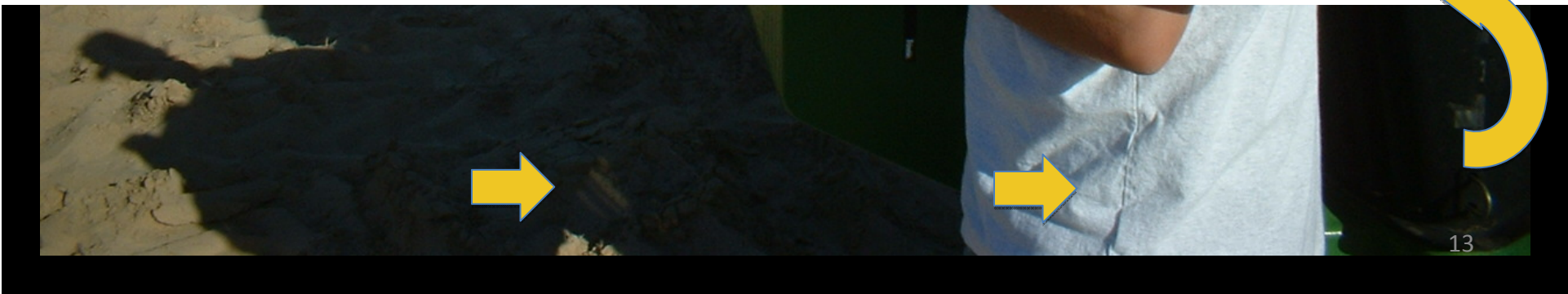
- Nearly instantaneous initialization - corrections in as quick as 1 minute
- High-accuracy - 3.8 cm horizontal accuracy.
- GNSS compatibility
- More uptime - continue working during times of correction signal loss for up to two minutes.
- No base station required
- Cost effective – No additional data or cellular plans required

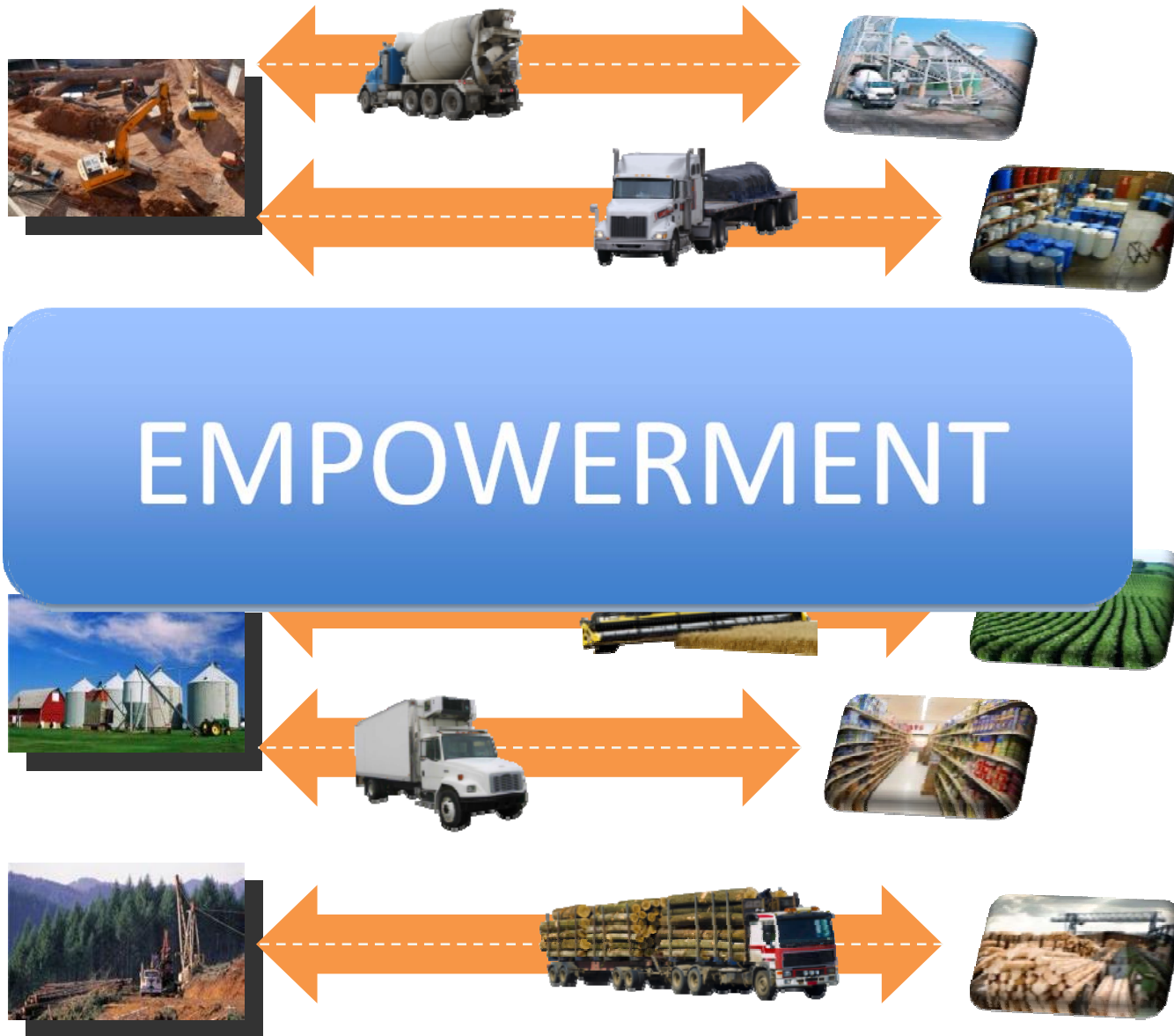


Courtesy of









Conclusion

- Multiple National, Regional and Continental Reference Frames are operational
 - Owners/Operators collaboration
 - EUREF, AFREF, SIRGAS to name a few
 - Trimble CentrePoint RTX is a global reference frame
 - Funding for Operation