



Centre de Recherche et Innovation
sur le Gaz et les Energies Nouvelles

**Keyhole – Latest improvements in
Europe**

Spring Keyhole meeting

GDF SUEZ

ÊTRE UTILE AUX HOMMES

Keyhole : Aims in Europe

■ Objectives :

- Cost savings regarding new installation in Europe for gas utilities

■ Solutions tested :

- Coring unit from Utilicor and Vac truck from Mac Laughlin 2009 -2012
 - Lack of power of aspiration
 - Needs tools to lay services lines
- Tests of tools from Tracto Technik in a Gerg project, in cooperation with Eon New build and Technology (Germany) – 2012 -2014



→ technical success – more than 50 sites sin Germany and France –

→ **Further cooperation with water utilities**

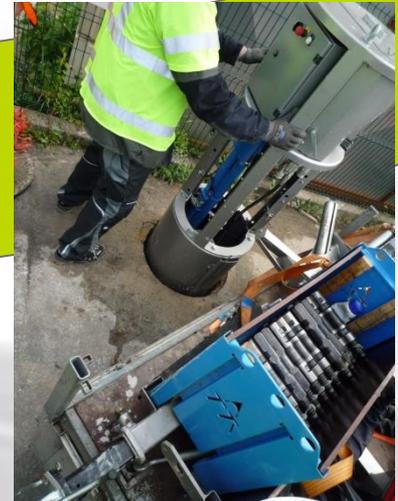


- **Pre industrialization for GDF SUEZ with 18 months trials and 300 connection (launched April 2014)**

« TT Grundopit K »



Keyhole : the way we do it (1/2)



Keyhole : the way we to do it (1/2)



Keyhole : Next step

■ For GDF SUEZ

- 18 months trial for Gas utilities in France
- 6 months trial for water Companies in France



■ For Gerg project

- Expert meeting planed in June 2014 :
 - Definition of the roadmap 2014 -2015
 - New utilization like cathodique protection, reparation
 - Huge interest of majors utilities : Gas Natural (Spain), Italgas (Italy), Kiwa (representative of Dutch DSO)
 - Follow up of tests carried in Germany
 - Communications planned in next IGRC (Copenhagen – September 2014)



■ Key point is to improve accuracy of localization

- Test and development of methods to improve localization of buried Pipe
 - Merge of acoustic, GPR and electromagnetic tools (2014-2017)
 - Test of RFID solution in an industrial way



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