



kpn





GIS benefits for Telco Operations

KPN experience





7 september 2010


Agenda


- KPN company profile
- GIS in KPN Operations
- GIS Case study
- GIS Vision

KPN company profile (1/2)*

Telco and ICT market leader in the Netherlands, mobile challenger abroad


The Netherlands	
   	Wireless
	Position 1 Market share ~50%
	Wireline
	Position 1 Market share >50%
	Broadband
	Position 1 Market share 44%
<ul style="list-style-type: none"> • Integrated market leader in telecoms • Own brands and partners • Leading business ICT service provider 	

Spain	
	Position n/a
	Market share < 0.3%
	Customers >0.2m
<ul style="list-style-type: none"> • MVNO on Orange network • Own brands and partners • Launched in January 2008 	


Germany	
	Position 3
	Market share 15.8%
	Customers 18.7m
<ul style="list-style-type: none"> • 'Challenger' network operator • Own brands and partners • Part of KPN as of 2000 	



- Mobile and Fixed Network Operator
- Mobile Network Operator
- Mobile Virtual Network Operator (MVNO)

Belgium	
	Position 3
	Market share >17%
	Customers 3.6m
<ul style="list-style-type: none"> • 'Challenger' network operator • Own brands and partners • Part of KPN as of 1998 	

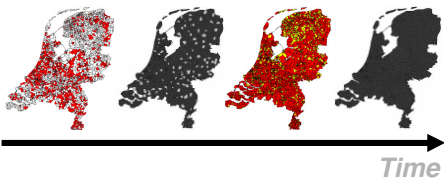
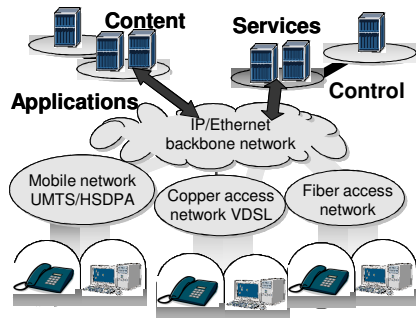



Group financials	
Revenues FY 2008	€ 14.6 bn
EBITDA FY 2008	€ 5.1 bn
FTE	35,502
Market cap	~€ 20 bn
Net Debt	€ 12 bn

France	
	Position n/a
	Market share < 0.1%
	Customers < 0.1m
<ul style="list-style-type: none"> • MVNO on Bouygues network • Own brands and partners • Launched in January 2009 	

* Numbers relate to Q3 2009 unless stated otherwise; market shares are management estimates

KPN Company Profile (2/2)

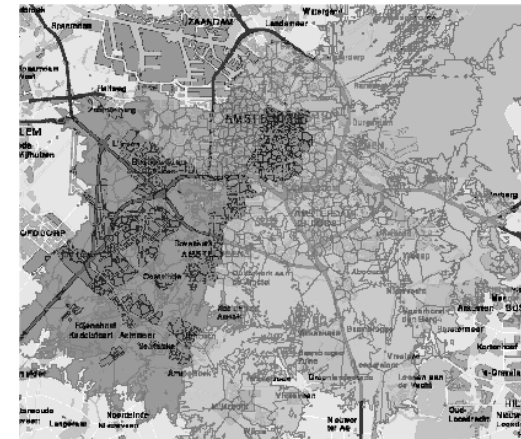
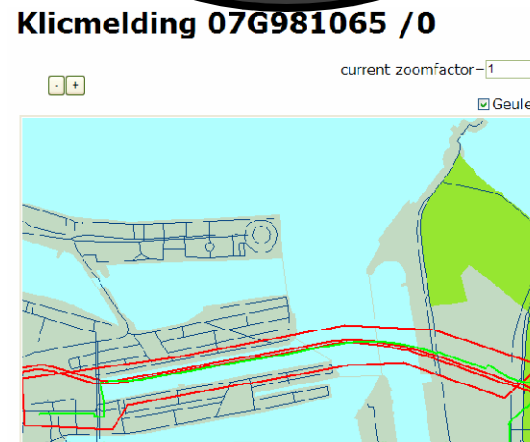
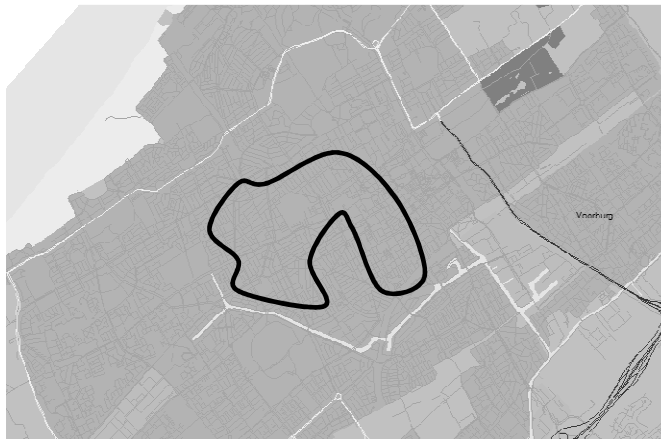
KPN wants to be 'best-in-class' network operator in the Netherlands

<p>Proactive network roll-out</p> <p>All-IP services and infrastructure</p>  <p><i>Time</i></p> <ul style="list-style-type: none"> • Mix of FttC and FttH as of 2008 • Accommodate data volume growth 	<p>Open access model</p>  <ul style="list-style-type: none"> • Infrastructure sharing 	<p>Committed wholesale partner</p>  <ul style="list-style-type: none"> • Based on state-of-the-art IP platform
<p>Simplified processes</p>  <ul style="list-style-type: none"> • Switching off legacy infrastructure • Simplified IT and operations 	<p>Lowest cost</p>  <ul style="list-style-type: none"> • Continued FTE and cost reductions 	<p>Key Requirements</p> <ul style="list-style-type: none"> • Customized IP services • Flawless network administration • Customer driven operations

GIS in KPN Operations

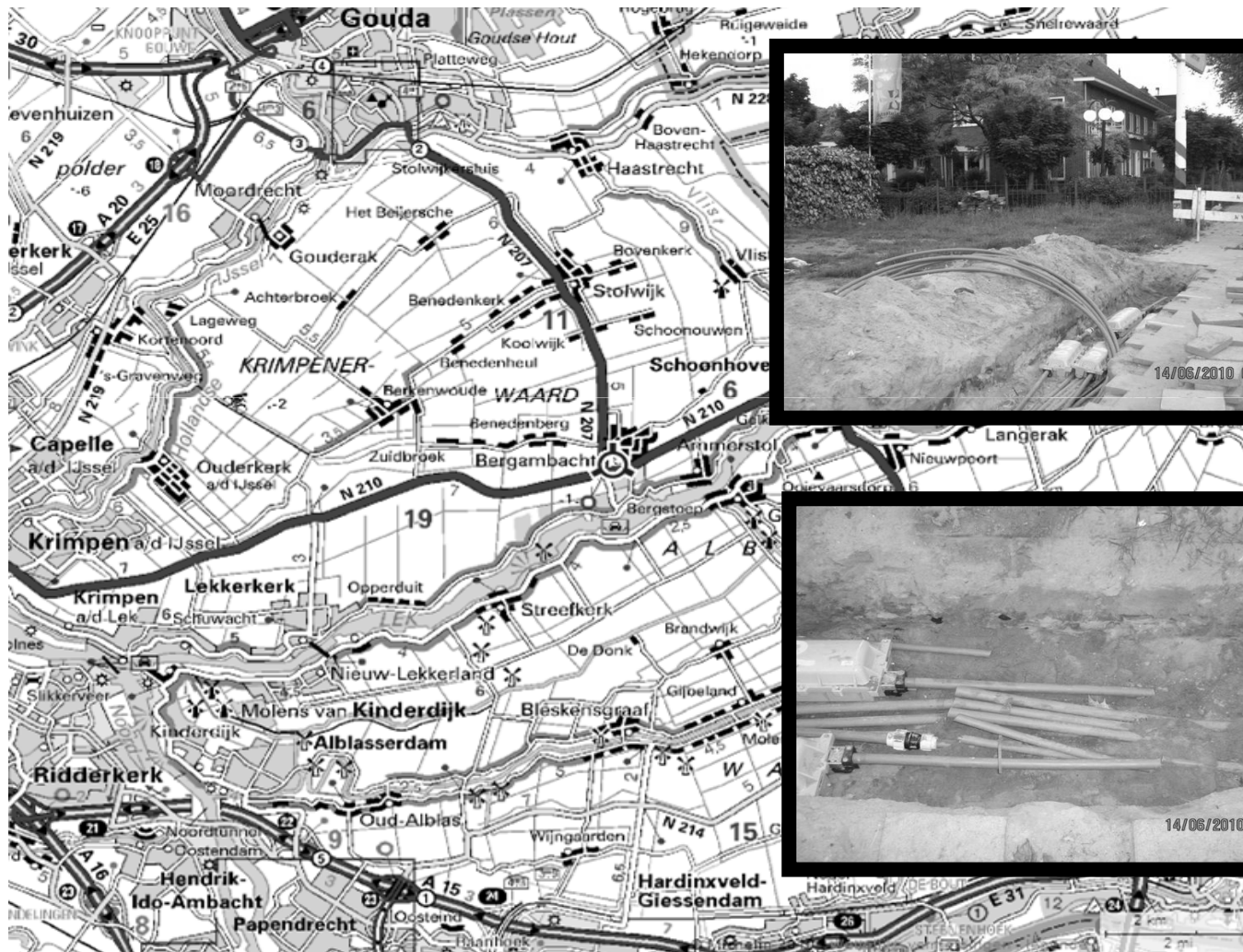


GIS
Customer service
Infra build
KLIC
Radio Planning
Network Monitoring



KPN broadly applies GIS in customer service and network operations

GIS case study



Localisation
+
Service Administration
+
Customer Information
=
Resolution!

GIS roadmap – Integration GIS and NWA

- KPN aims for a model of deep correlation between the network administration layers and the customer service layers:
 - Network layers:
 - Passive layer (GIS; physical, passive network elements and location)
 - Active layer (OSI layer 1, 2 and 3 active network elements)
 - Logical layer (OSI layer 1, 2 and 3 logical paths administration)
 - Customer Service layers:
 - Customer administration
 - Service administration (e.g. iTV, Internet, Telephony)

- This will enable to localize service and customer impact caused by maintenance on cable infrastructure or failures in active network elements
- Only a handful of coupled network administration systems will replace a myriad of current systems

