



IP and Data Provisioning Via Satellite. Example of application in a Rural Region in Spain

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IP over Satellite in a rural area

SINGULARITIES OF RURAL AREAS. EXAMPLE: REGION OF CASTILLA-LA MANCHA

- Region with a highest industrial growth rate
- Almost 100.000 enterprises (2001). Employment spread as:
 - 19.6 % industrial activities
 - 14.5 % building constructions and materials
 - 11.1 % agro-food industries
 - 54.8 % services
- Difficulties/weakness of individual initiatives
- Powering of the entrepreneurs/industrial synergies



Need for Telecommunications infrastructure

- 79.461 Km²
- 15.7 % surf. Spain
- 1.726.199 Inhab.
- 21,7 Inhab/km².
- 919 Municipalities
- 99.423 Enterprises





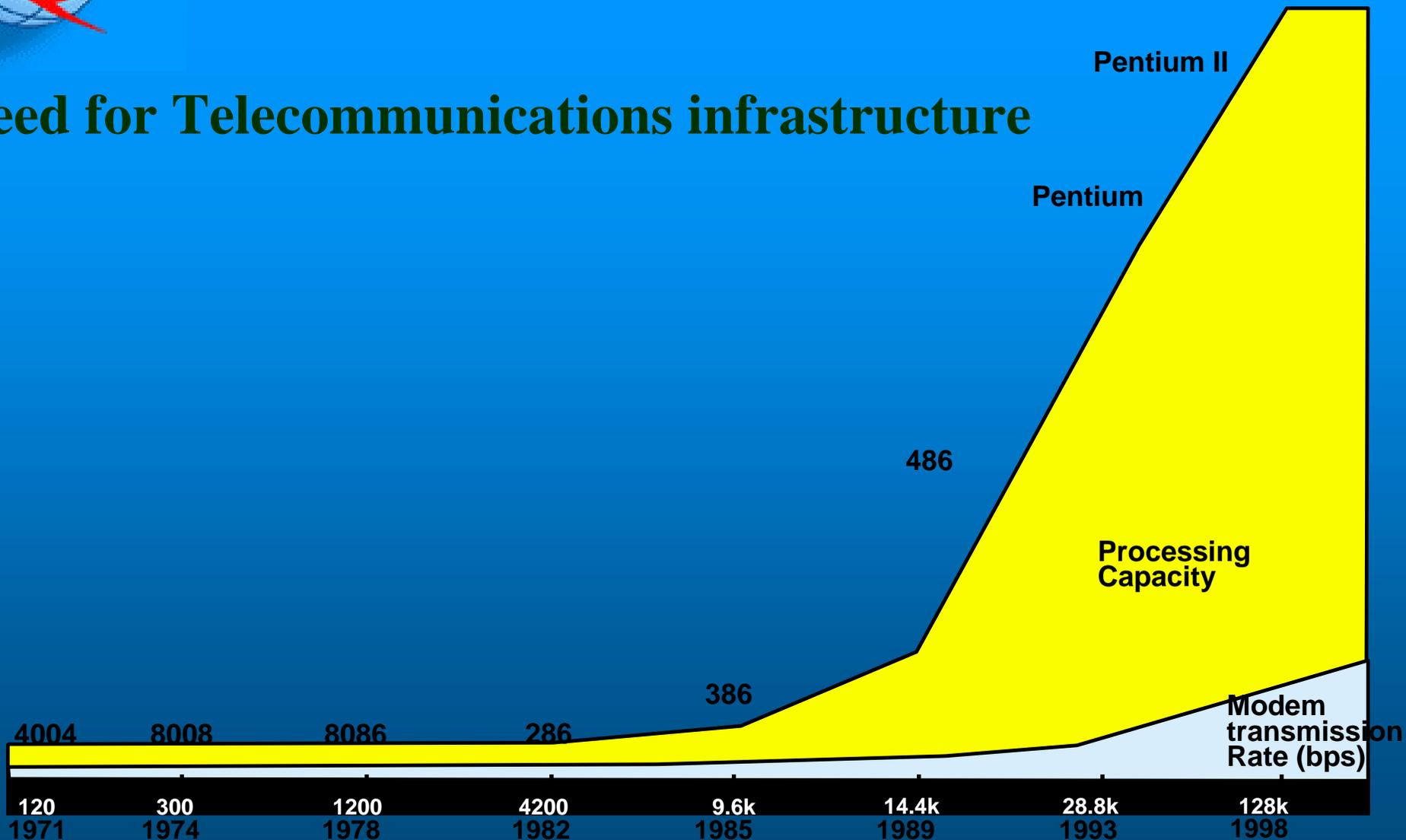
Need for Telecommunications infrastructure

ADSL in Seseña

A screenshot of a Microsoft Internet Explorer browser window displaying the website InfoNegocio.com. The browser's address bar shows the URL http://www.infonegocio.com/. The website header includes the Telefónica logo and the text 'InfoNegocio.com Servicios para profesionales y empresas'. A left-hand navigation menu lists various topics related to ADSL. The main content area is titled 'Base de Datos de Teléfonos' and displays the phone number 'Nº Telefónico: 918088013'. Below the number, a message states: 'Por el momento, no está prevista la implantación de ADSL para ese número telefónico'. A red arrow points from the text 'ADSL in Seseña' to the phone number, and a red oval highlights the message box. The Windows taskbar at the bottom shows the Start button, several open applications, and the system clock at 1:05 PM.

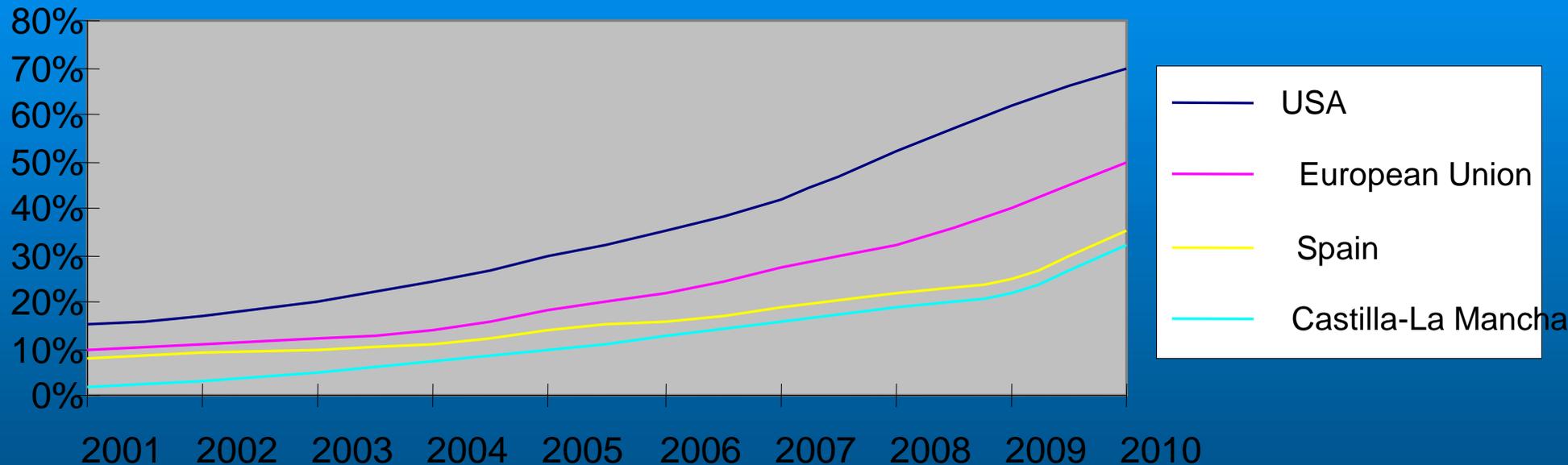


Need for Telecommunications infrastructure



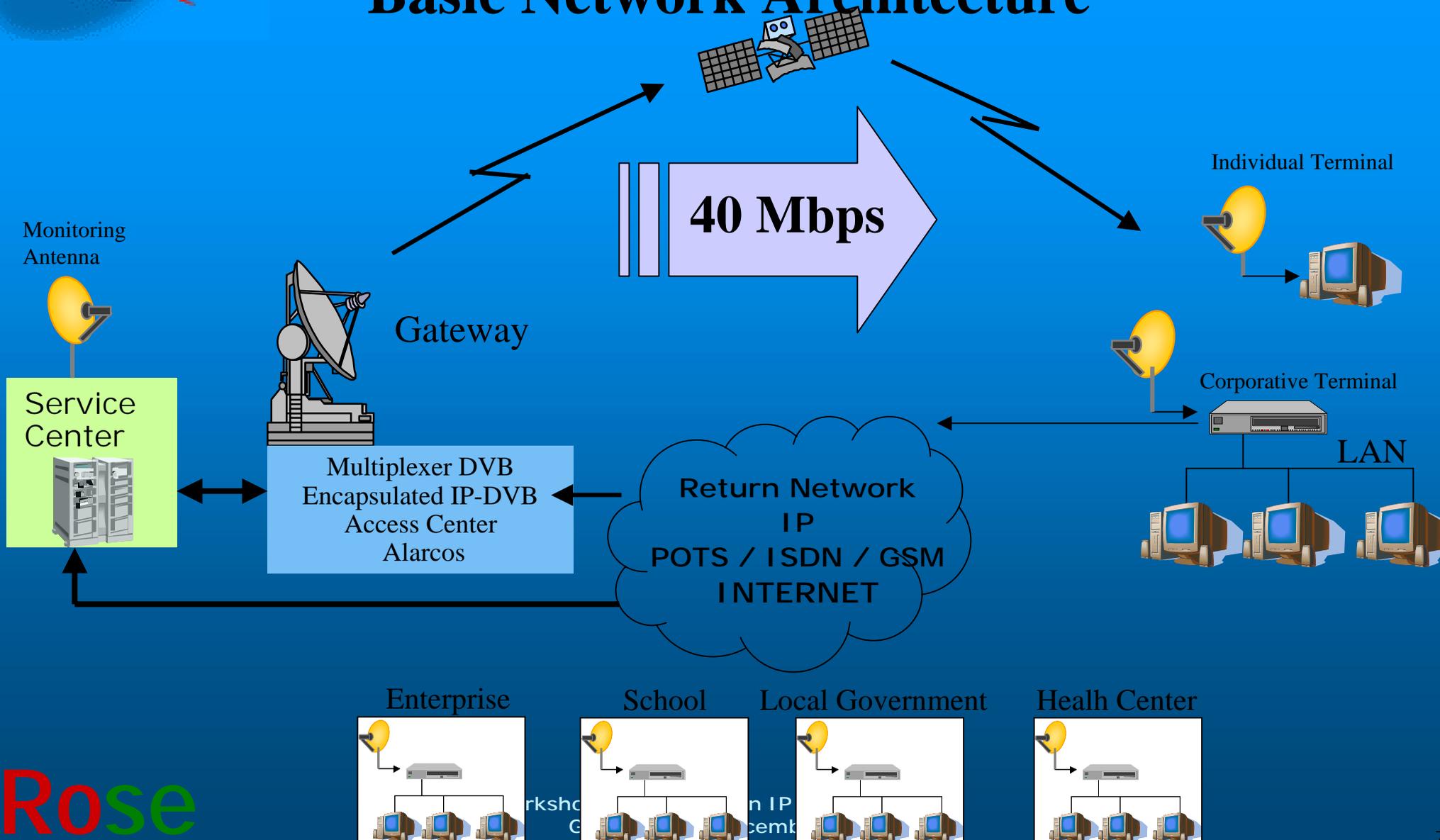


Forecast of Wide-Band Transmission Demand





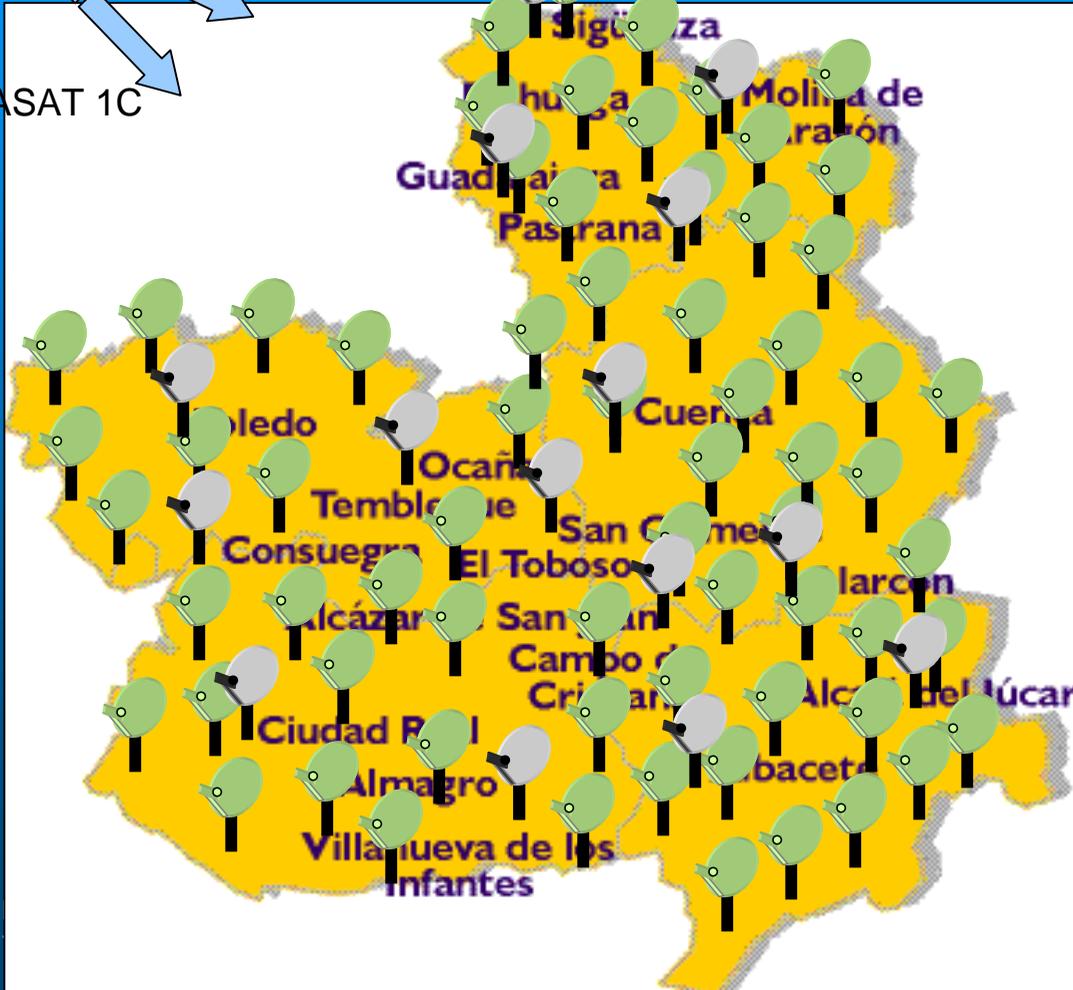
Basic Network Architecture





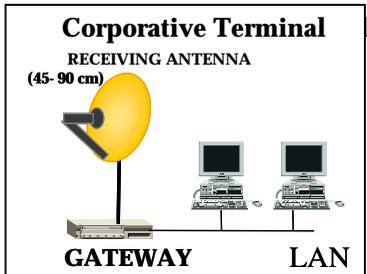
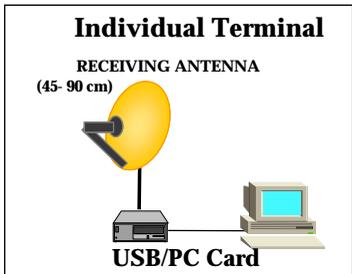
International Telecommunication Union

Satellite Wide-Band IP Network for Castilla –La Mancha



Rest of Municipalities (< 1000 inhabitants)
UNIVERSAL ACCESS

Receiving Terminals



on Sate
neva, 9-



Relevant figures of the Satellite Sector (Western Europe, 1995 - 2009)

Transponder utilization	1995	1996	1997	1998	1999	2004	2009
Equiv. to 36 MHz unit	704	727	751	825	910	1660	2227
C Band	199	219	217	255	249	257	201
Ku Band	444	512	563	684	776	784	605
Ka Band	28	51	51	51	76	557	557



Other initiatives

Development of technological projects

- * **MOBILITY.**
- * **FLEXIMATV.**
- * **DENUESTRA TIERRA.B2B. Profit**
- * **WIRELESSICT. Profit**
- * **CONSISTORIA. Profit**



The role of Broadband applications via satellite

“In an ideal, high bandwidth world, every home and office would be directly connected to a fibre optic network...But for the moment, the world will have to make do with less than perfect slip roads on to the information superhighway.”

From *Widening the wire*, Financial Times, 12 August 1999

- o Broadband satellite provides a direct connection to the information superhighway, thereby solving
 - The last mile bottleneck and the network bottleneck
 - Constraints of existing infrastructure
 - The “promise” of bandwidth
- o Broadband satellite is an enabler that comprises breakthrough technology
 - Enables the high-bandwidth, high-quality, flexible network
 - Shatters the constraints of the last mile and creates unprecedented e.business-related, value-added services.



Thank You for your attention

www.DeNuestraTierra.com

www.SpanishMade.com

www.Rose.es