



# Oracle Spatial Users Conference

April 27, 2006  
Tampa Convention Center  
Tampa, Florida, USA

**ORACLE**

**SPATIAL**

April 2006

Oracle Spatial Users Conference

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# **How Telekom Serbia Has Improved Customer Satisfaction *(and reduced costs)***

# Typical Utility Information Systems




Engineering  
Design



Asset  
Management



Records  
(GIS)



Workflow

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# Engineering Design

- Utilities design their infrastructure network.
  - Location
  - Properties
- Typically developed with desktop CAD.
- Deliverable is paper constructions drawings.

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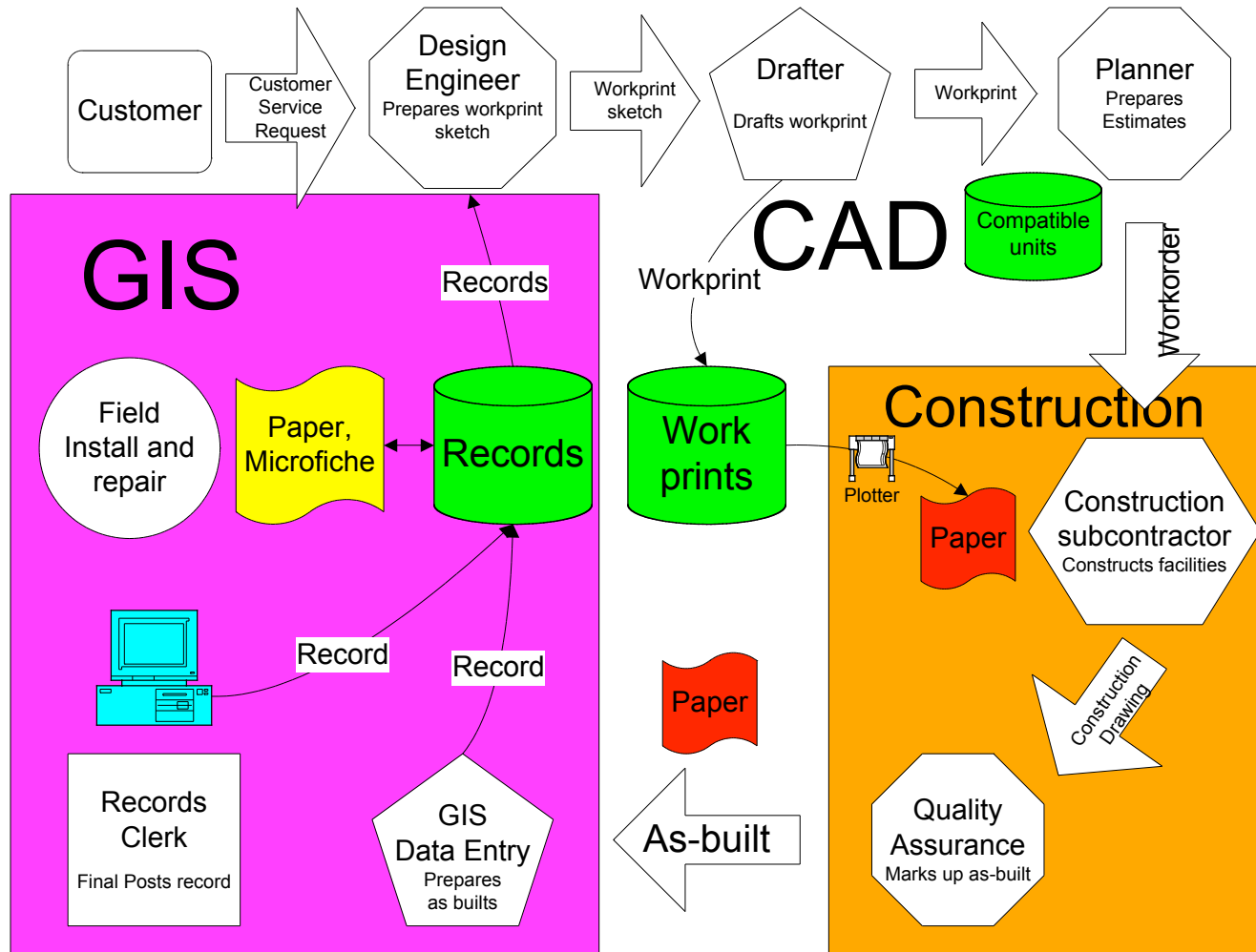
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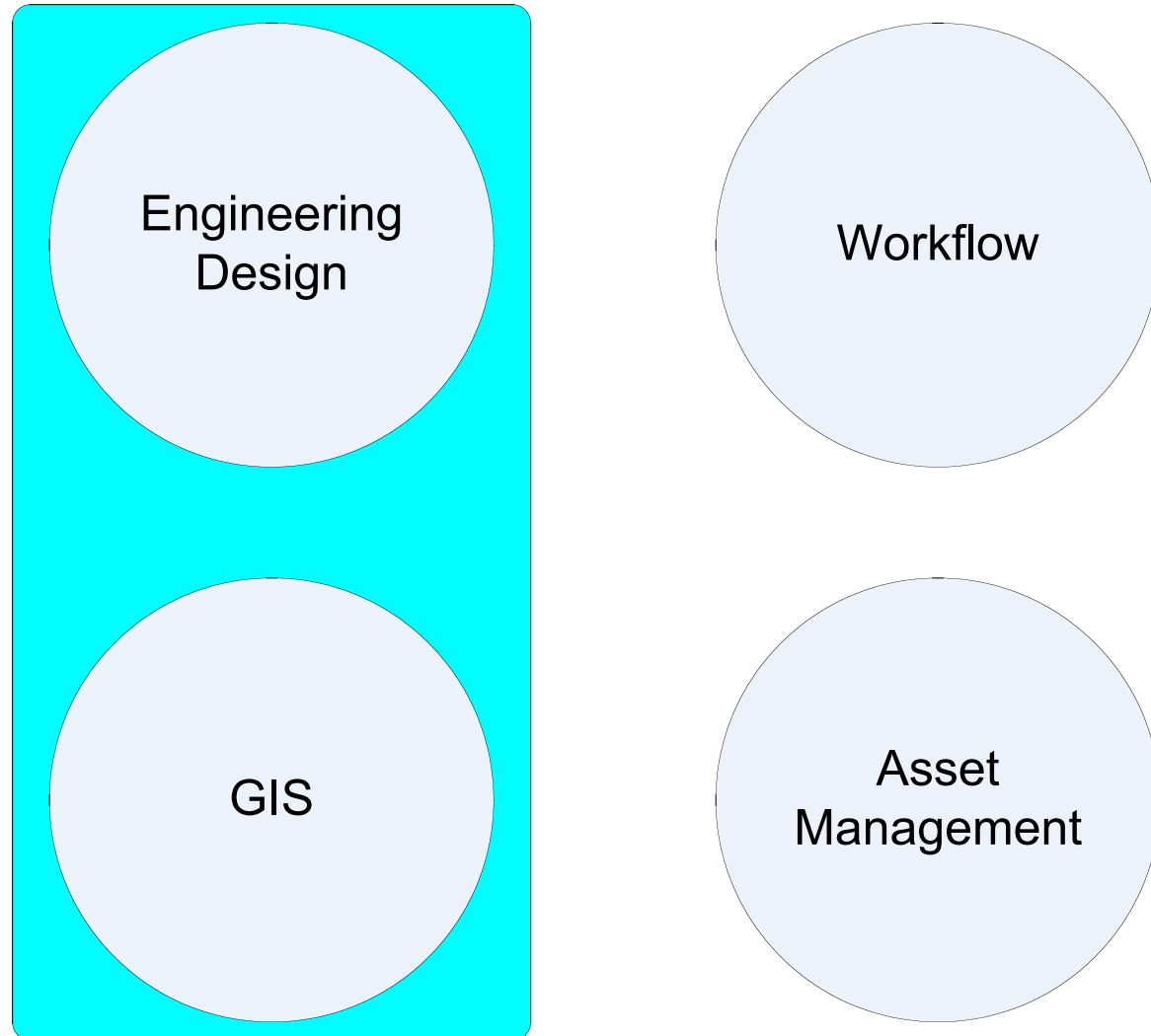
# Records Maintenance (GIS)

- Contains information about infrastructure network including
  - **Type of equipment (transformer, primary conductor, pole, ...)**
  - **Location**
  - **Properties**
  - **Connectivity and associations**
- Typically maintained in a spatial RDBMS

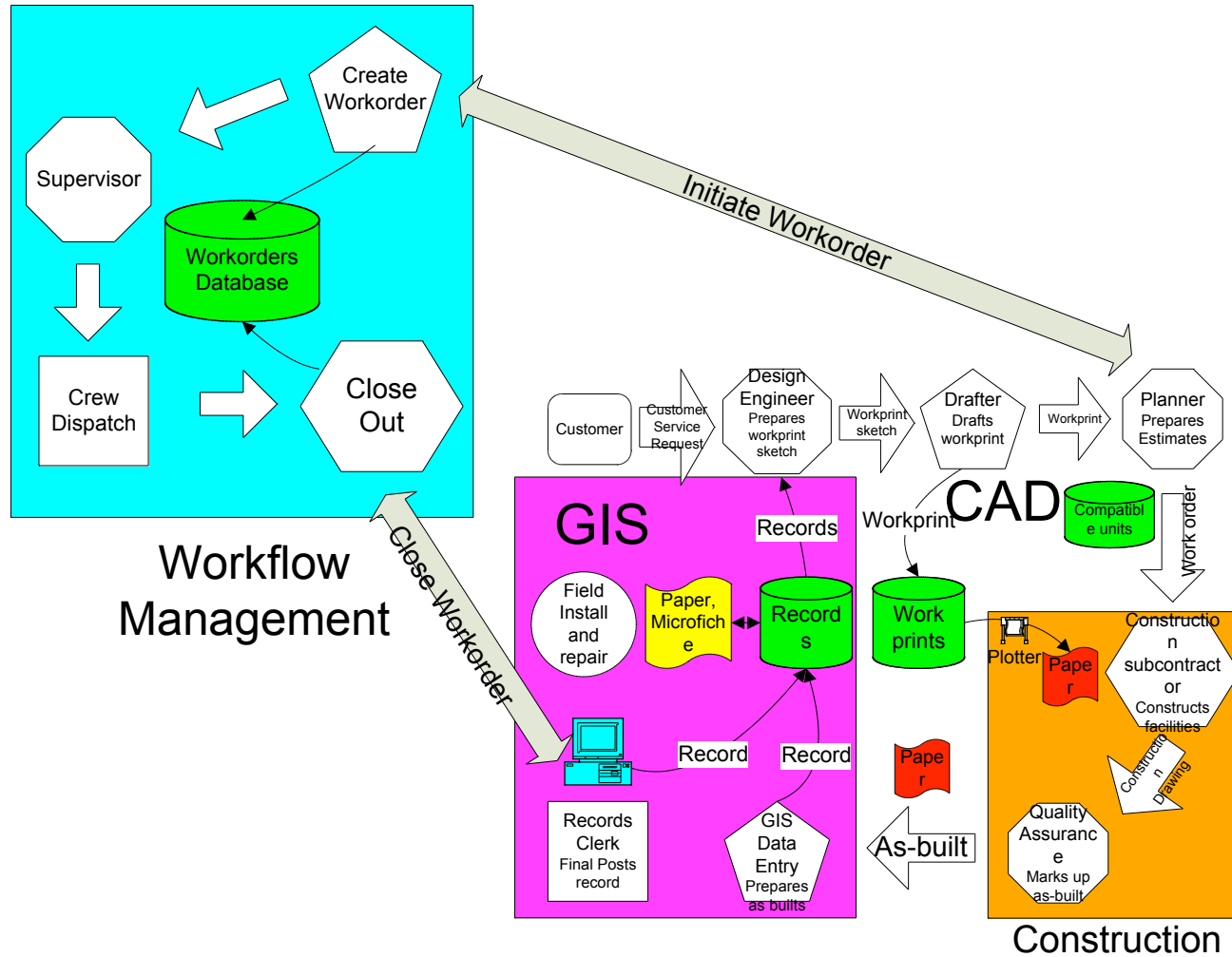
# Infrastructure Design and Maintenance



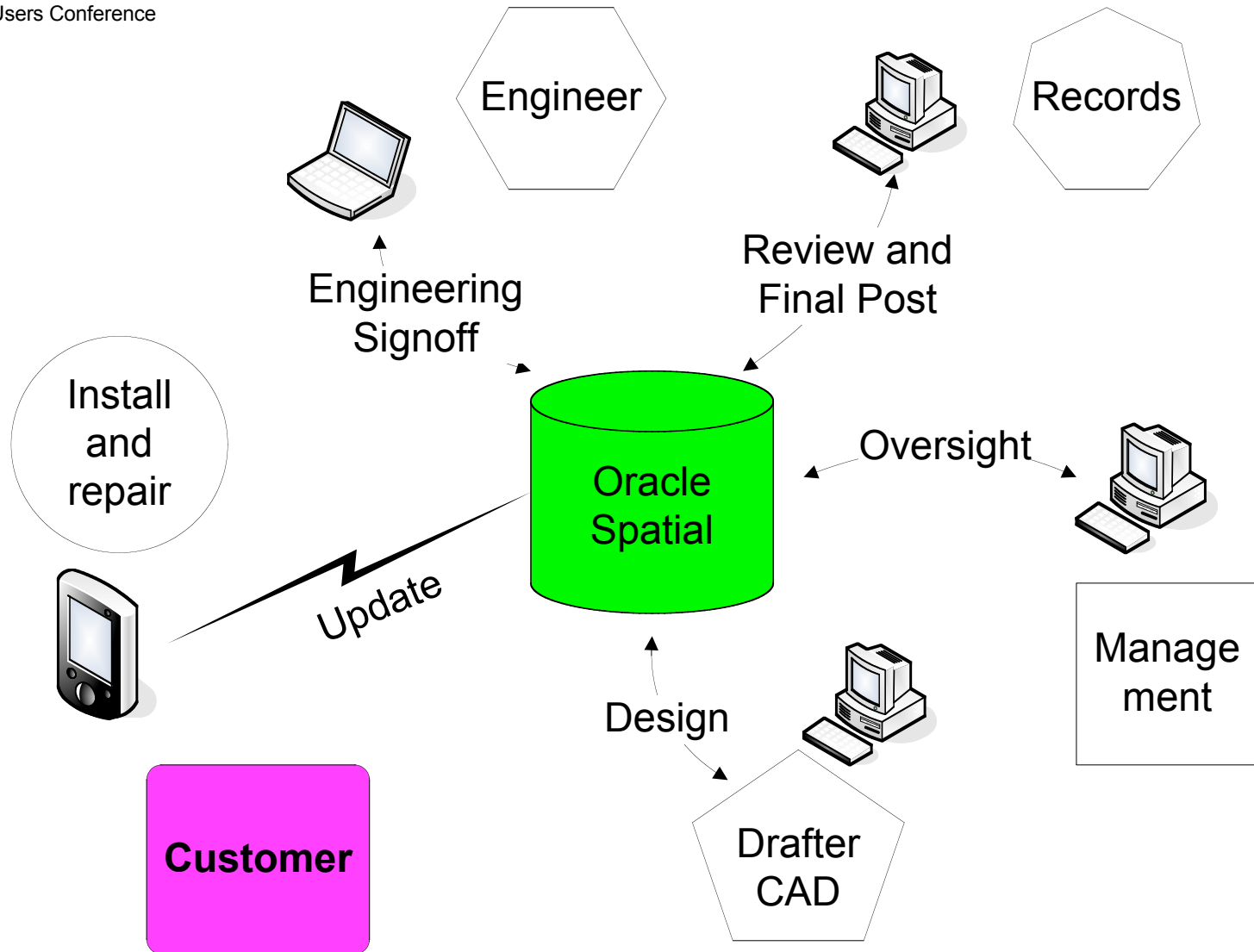
# CAD – GIS Integration



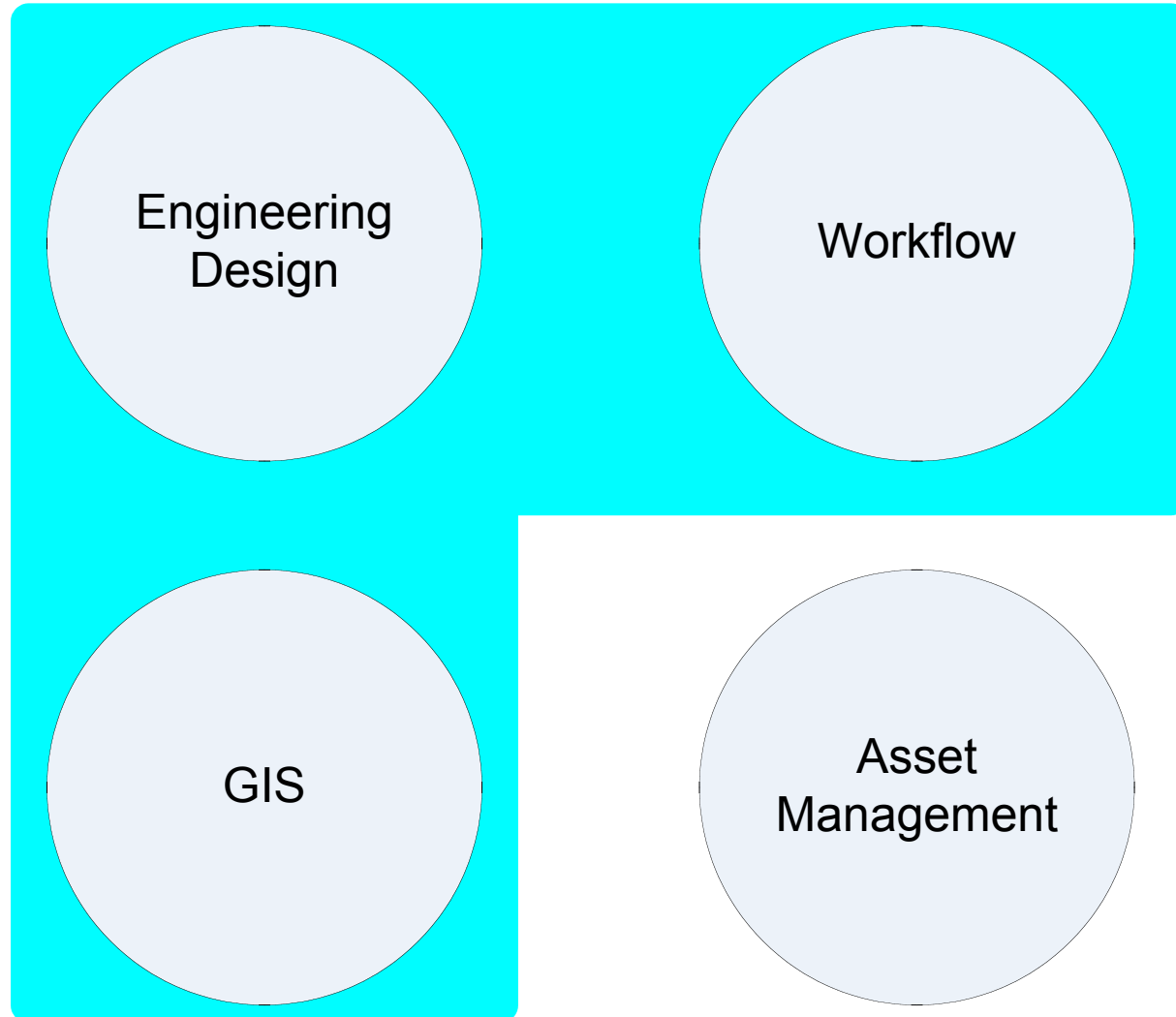
# Integrating Workflow



# Streamlined Workflow



# Workflow Integration



# Telekom Srbija

## IS Development strategy:

- **Integrated telecom suite**
- **Model based design using UML**
- **Based on latest technology platforms**
  - **Oracle Spatial ORDBMS**
  - **Autodesk Geospatial**

# Telekom Information Systems (TIS)

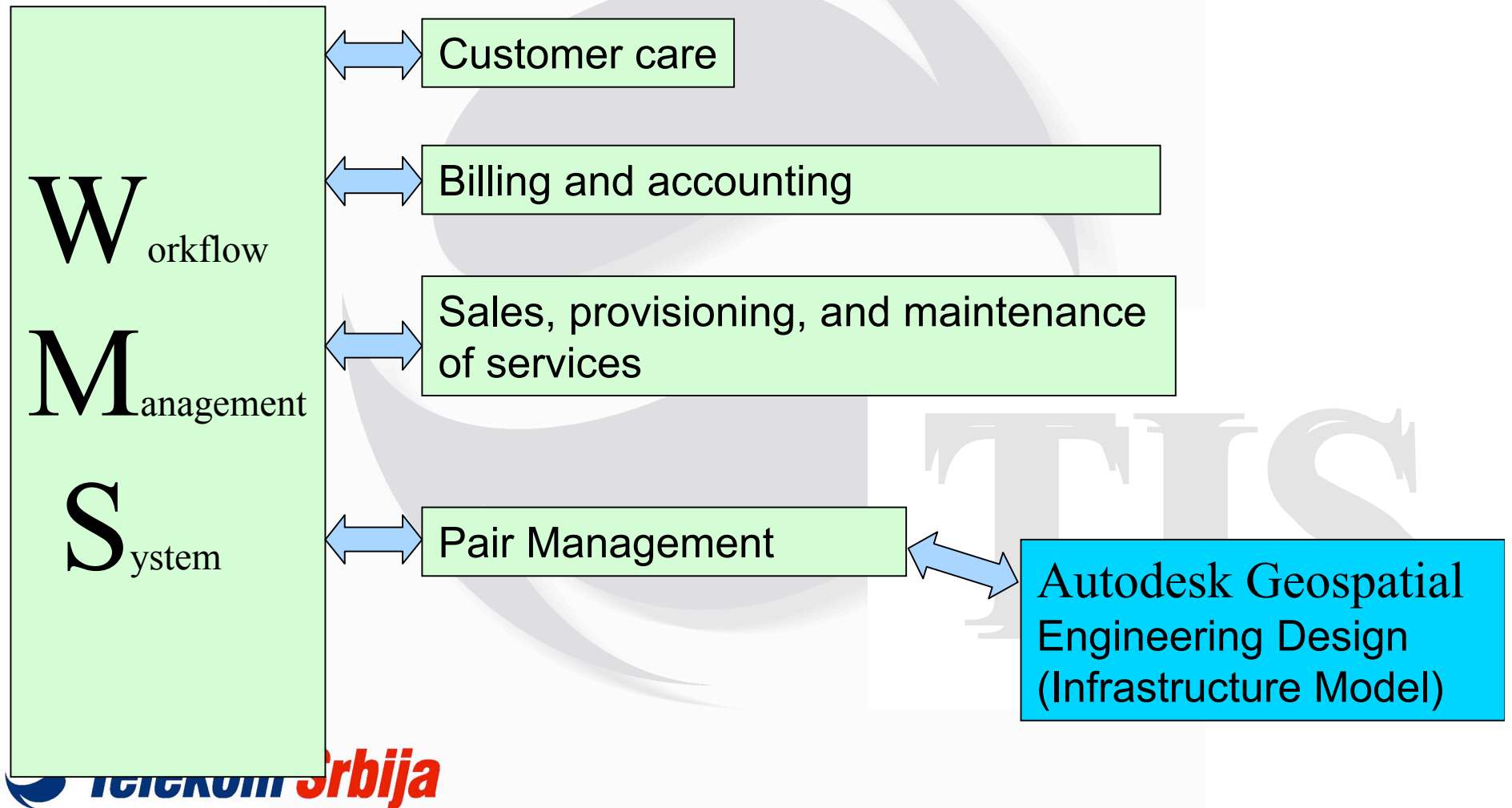
*Automates business processes:*

*Technical,  
Commercial,  
Financial and  
Administrative*

*within Telecom Serbia system*



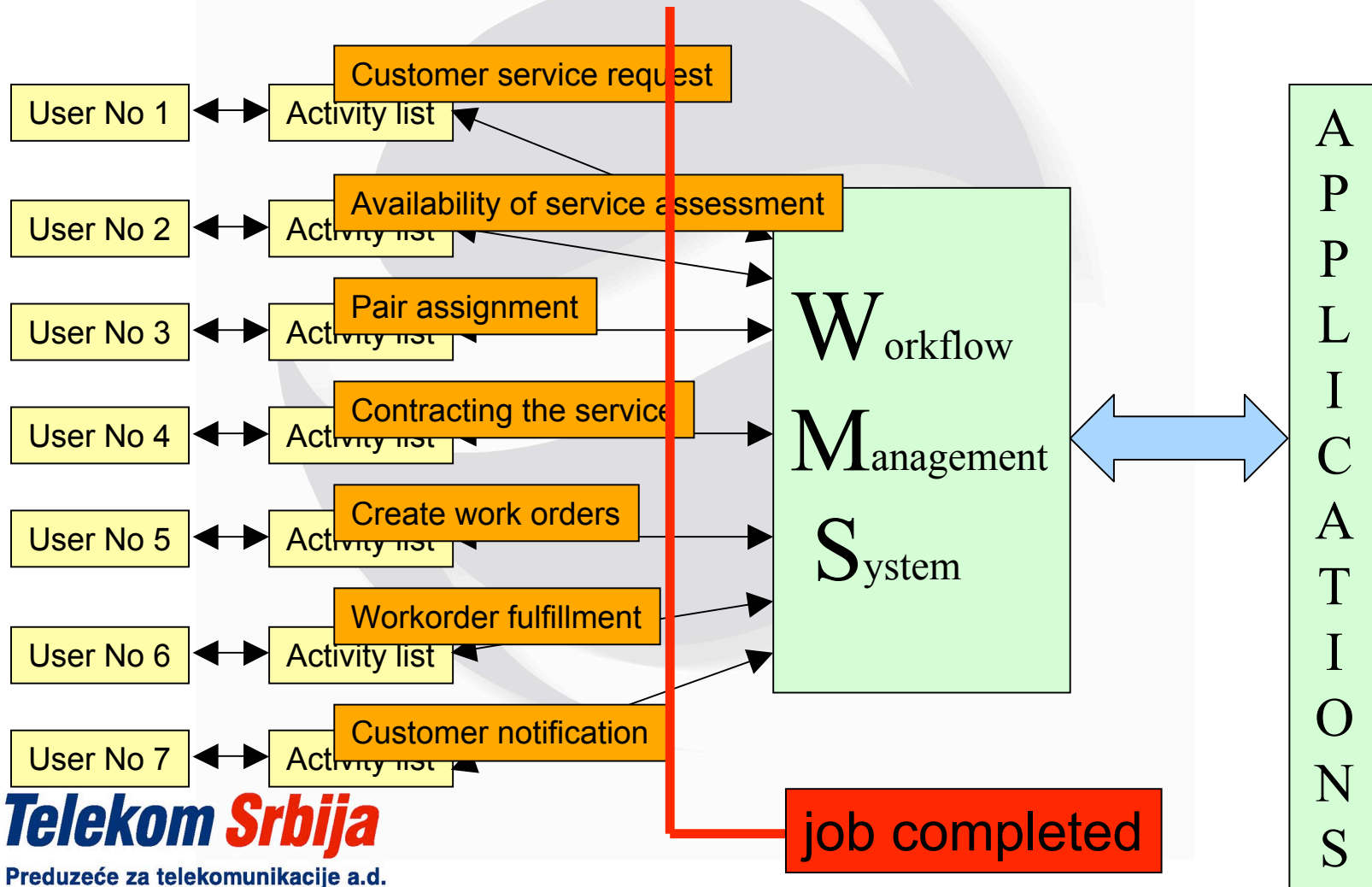
# TIS Version 2



**TELEKOM Srbija**

Enterprise Data Model implemented in ORACLE

# Job control by WMS



Pregled detalja o pretp

Razdelnik 10037

Kablovi

Stara oznaka Kapac. /4Preč

009	600	0
00V	250	0
010	600	0
011	400	0
012	400	0

Izvodi na kابلu

Broj	Inter. ozn.	Mes
1		BEOG
2		BEOG
3		BEOG
4		BEOG
5		BEOG

autodesk

- Centrale
  - Reonske centr
  - Krajnje centrale
  - Tandem centra
  - Grupni stepeni
  - Podcentrale
- Izvodi
  - Krajevi grada
    - Abc
  - Kucni brojevi
    - Abc
  - Zgrade
  - Ulice
- Sume
- Parkovi
- Zelene površine
- Platoi

Zgrade : 1 'Izvodi' selected

1 : 5,000 2,604 x 2,010 (ft)

- Centrala
- Razdelnik
- Kabl
- Izvod

Selected Cable Area

Broj Izvoda	Tip Izvoda	Pretplatnicki Kabl
3	Unutr. u zgradi	397

Prenesi

Izlaz

# Main exchanges in City of Belgrade

The screenshot displays the Autodesk software interface for a city planning or GIS application. The main window shows a map of Belgrade with various blocks and streets. A red circle highlights a specific location labeled 'Novi Beograd' within 'BLOK 29'. A text box with the text 'Zoom-in to selected Exchange' is overlaid on the map. The interface includes a legend on the left with various categories like 'Centrale', 'Reonske cer', 'Krajnje centra', etc. The status bar at the bottom shows 'Odabrali ste centralu: NoviBeograd1' and 'GUP : 1 : 351,923 35.4 x 26.8 (mi)'. The Autodesk logo is visible in the top right corner of the map window.

Legend categories (left):

- Centrale
- Reonske cer
- Krajnje centra
- Tandem cent
- Grupni steper
- Podcentrale
- Glavni pravci
- Reke
- GUP
- Mesne zajednice
- Opstine

Legend categories (right):

- Centrale
- Reonske cer
- Krajnje centra
- Tandem cent
- Grupni steper
- Podcentrale
- Izvodi
- Krajevi grada
- Kucni brojevi
- Zgrade
- Ulice
- Sume
- Parkovi
- Zelene površine
- Platoi

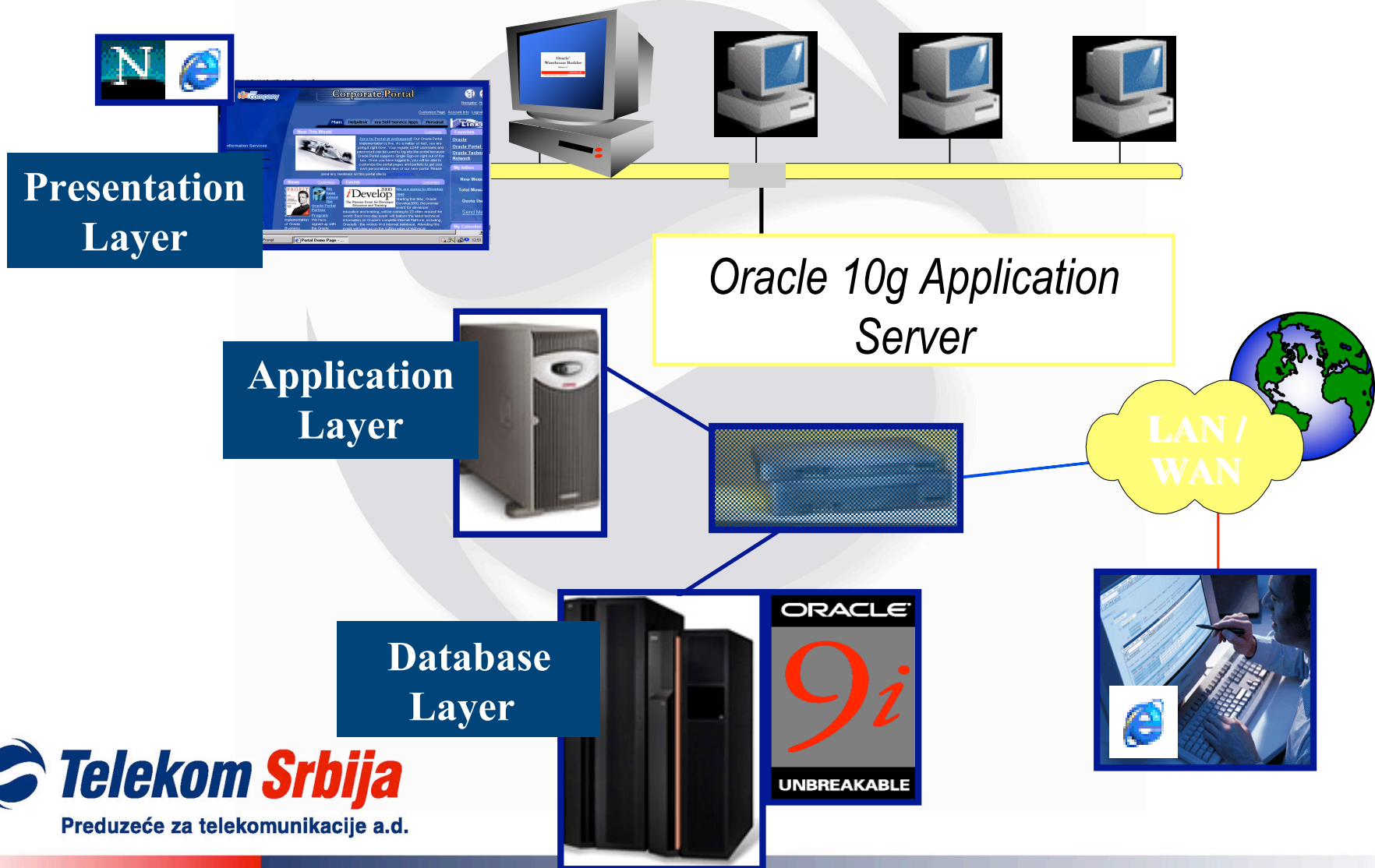
Map labels: BLOK 29, BLOK 25, Novi Beograd, BULEVAR AVNOJA, IPANSKIH BORACA

Status bar: Odabrali ste centralu: NoviBeograd1, GUP : 1 : 351,923 35.4 x 26.8 (mi)

Zoom-in to selected Exchange



# Multi tier Architecture



# TIS Statistics

- Telecom Serbia service area is all of Serbia
- Enterprise database contains:
  - 2,350,000 customers
  - 2,500,000 access lines
  - 3,000,000 copper pairs



# TIS statistics

**7,000** intranet users use TIS each day  
2,000 concurrent users (average)

TIS processes in average:

- **3,500** customer requests per day  
(**70,000 – 80,000** per month)
- **9,000** work orders per day  
(**200,000** per month)
- **2,350,000** invoices per month  
(printing requires 5 days)



# Oracle Spatial enables ...

- **Single point of truth**
- **Simplified engineering design process**
  - CAD/GIS integration to eliminate redundant data and processes, eliminate backlogs, reduce overhead, and make skilled workers available for strategic activities.
- **Integration**
  - Integrating workflow reduces costs and provides better customer service
- **Improved customer service – time to provision a new telephone line reduced from 40 days to 2 days**
- **Reduced costs**



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