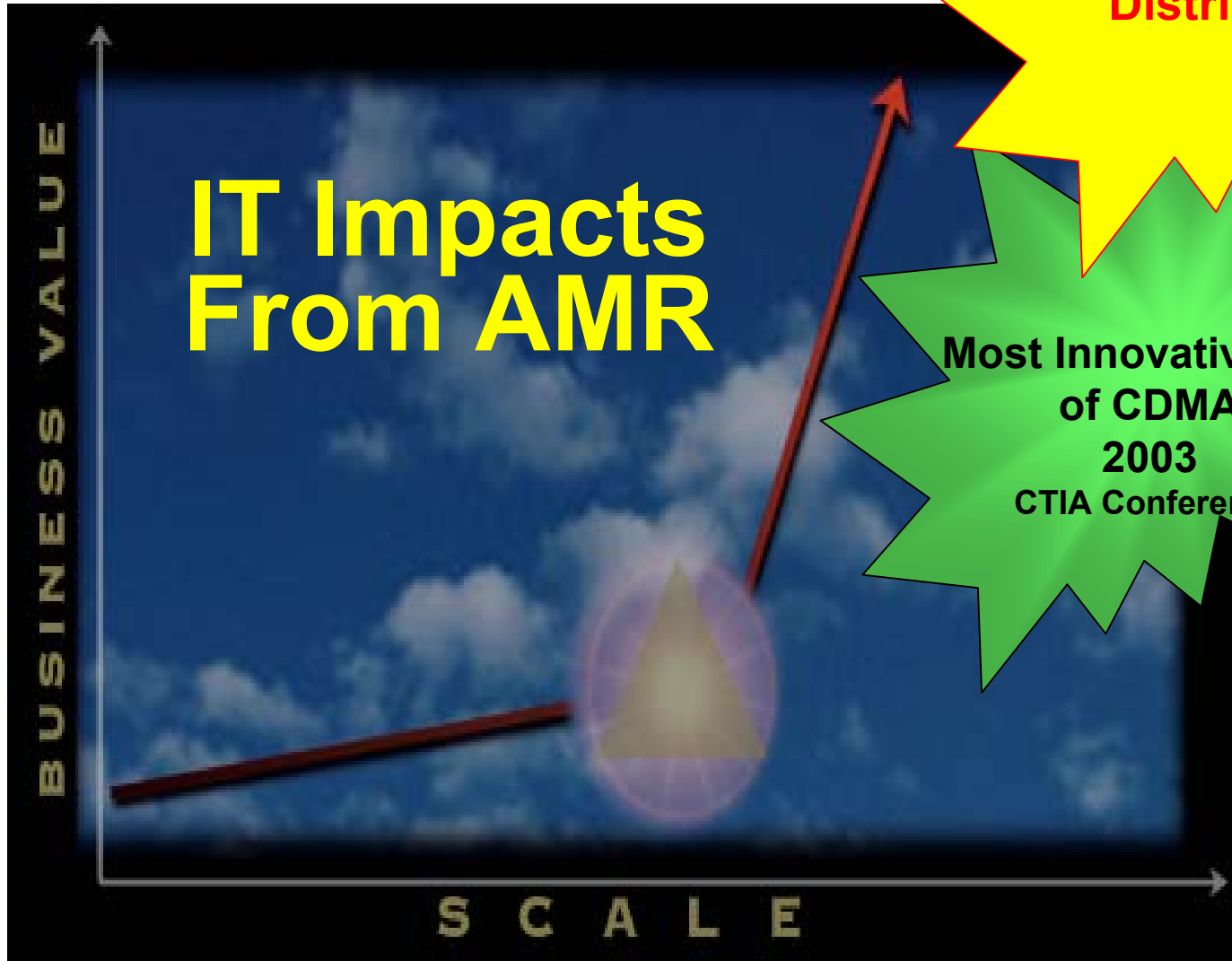


# MW Consulting, Inc.

**AMR Project  
of the Year  
2004  
DistribuTECH**

## IT Impacts From AMR

**Most Innovative Use  
of CDMA  
2003  
CTIA Conference**



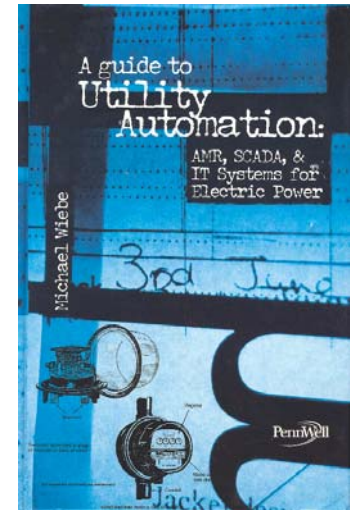
# Key people at MW Consulting

- **Michael Wiebe**

- 18 years in the energy industry
- Founded Iris Systems and sold it to Itron in 1996
- Over \$750M in AMR projects creating over \$300M in NPV
- PennWell published book on AMR's critical competitive role
- Official AMRA instructor on business case development

- **Gary Fauth Ph.D.**

- 21 years in the energy industry
- Harvard PhD in Economics, taught at Kennedy School for Business for 12 years
- Over \$750M in AMR projects creating over \$300M in NPV
- Official AMRA instructor on business case development
- Extensive Customer Relationship Management experience



# We have supported over 18 million meters of AMR projects.

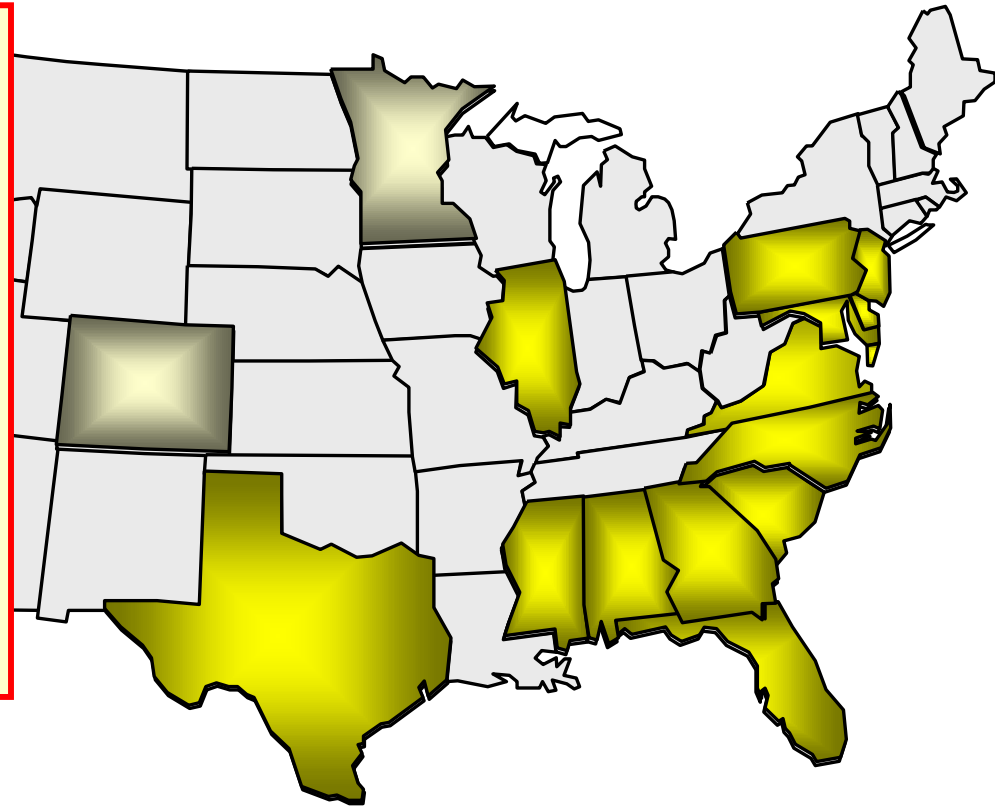
AMR Project  
of the Year  
2004  
DistribuTECH

## AMR Project Summary:

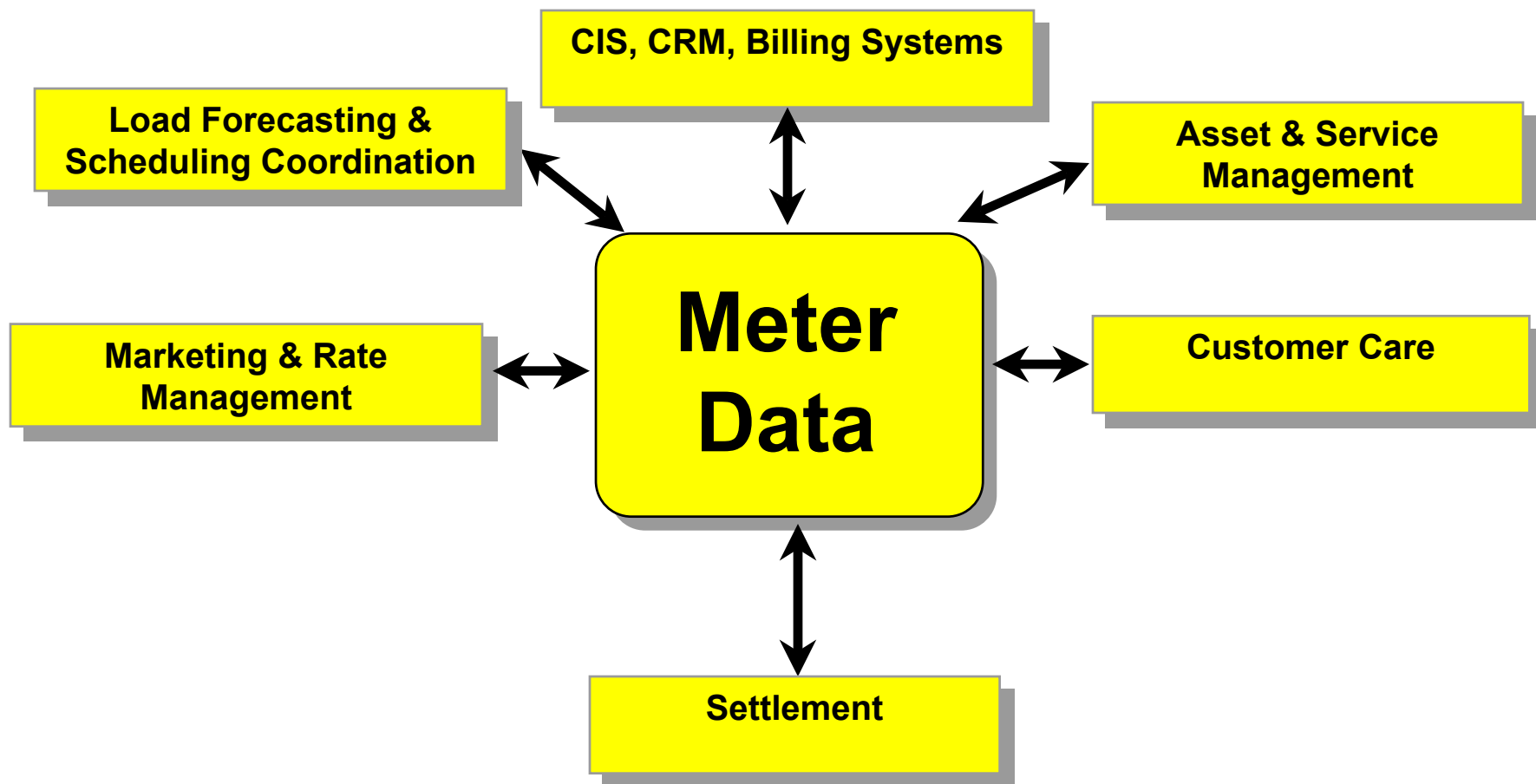
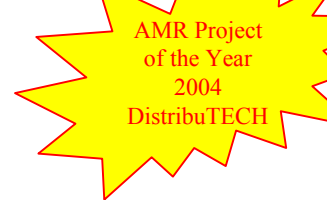
- > 18 M meters of business cases
- > 5 M under contract
- > \$750 M in contracts
- Vendors: CellNet, DCSI, Itron, Comverge SmartSynch
- Contract types: buy, outsource

## Project Examples

- Phase 1: Meter Reading Strategy
- Phase 2: Business Case
- Phase 3: Contract
- Phase 4: Implementation
- Phase 5: New revenue opportunities



IT and meter data management is vital to current and future business processes.

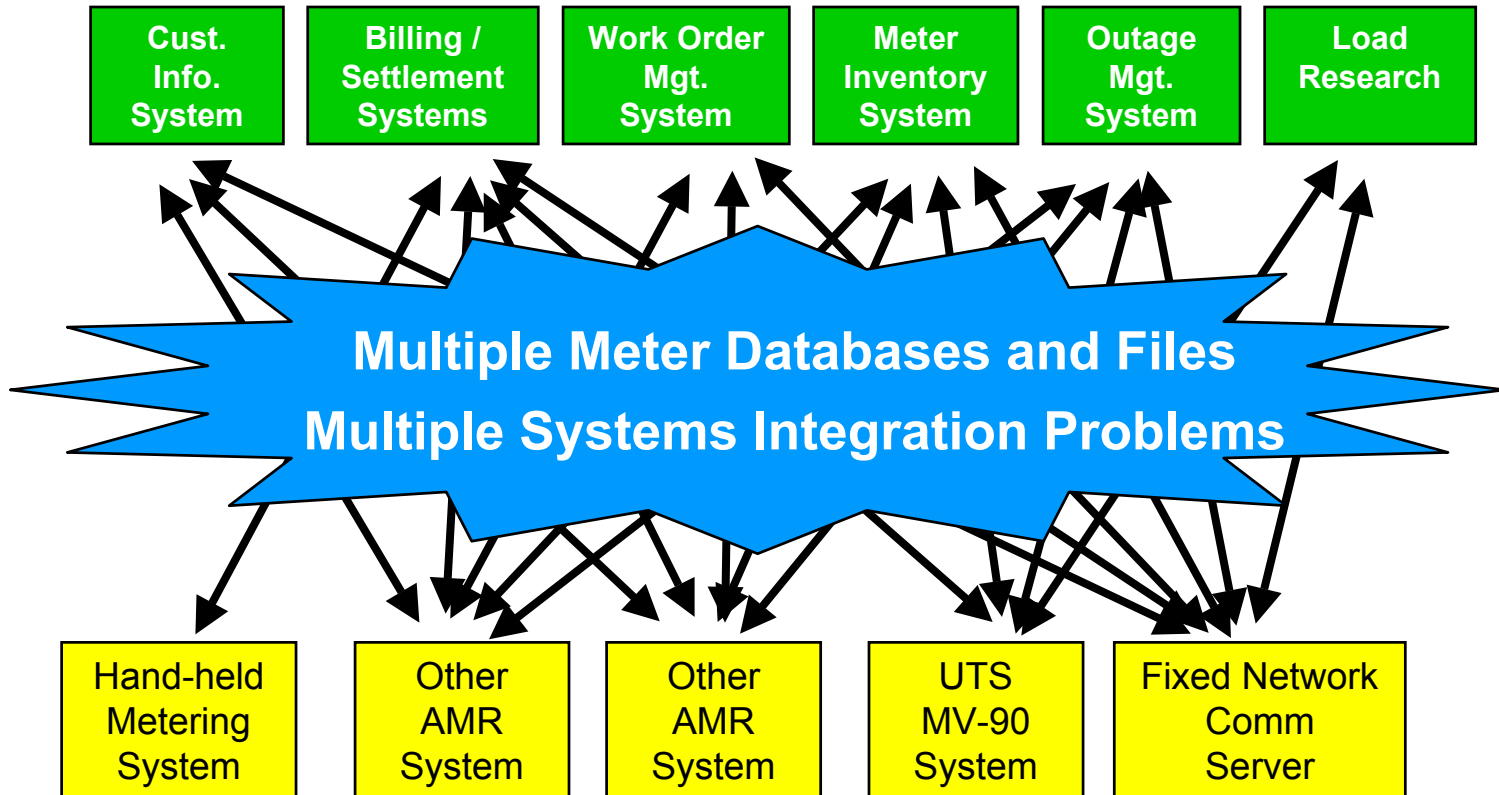


# What's the role of IT in an AMR project?

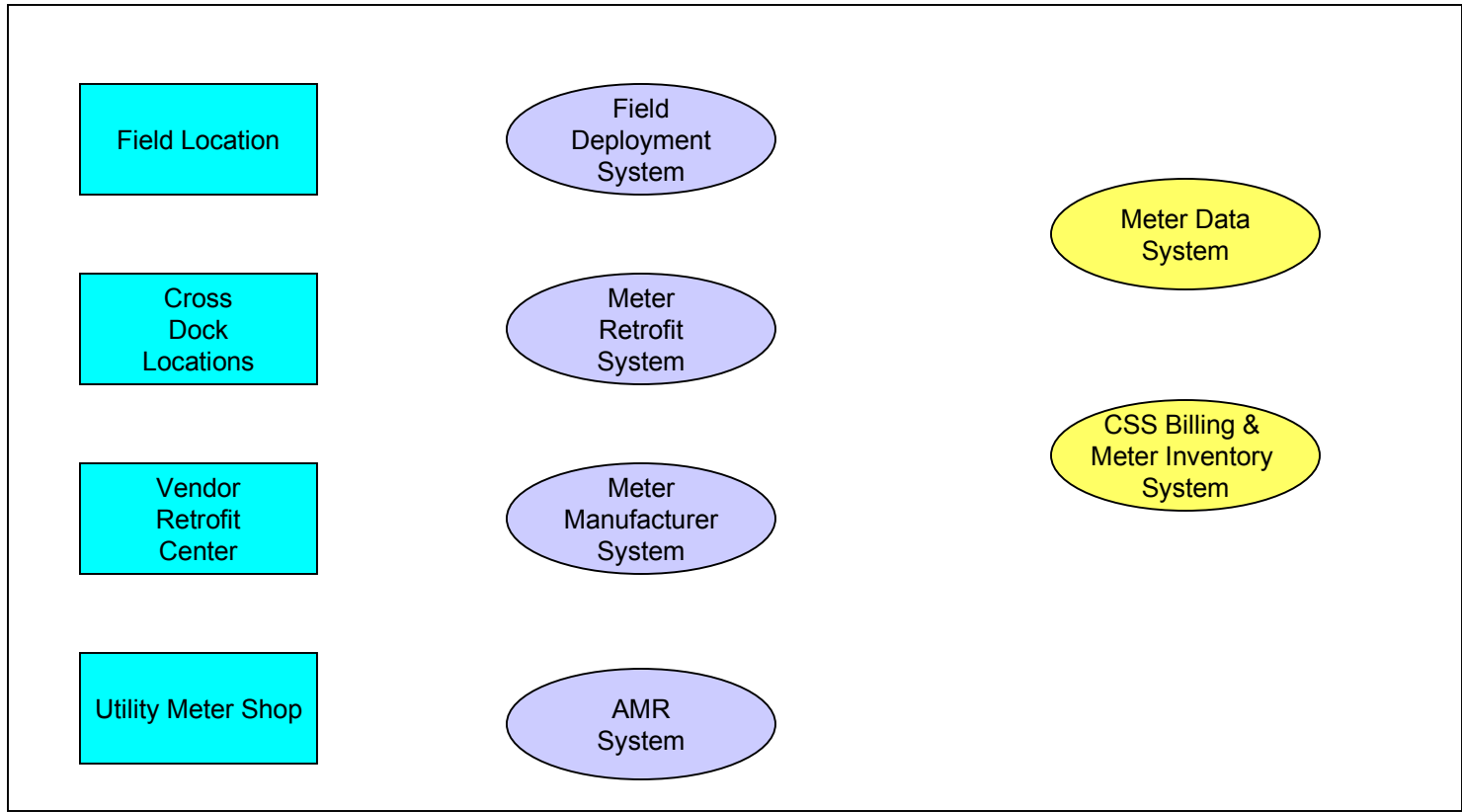
---

- Contribute to making the potential benefits real
- Interface new systems to legacy systems
- Implement new systems
- Upgrade existing systems

# IT firms, system integrators, deployment services firms are 'selling' complexity.



# There are over 100 interfaces involved in an AMR system deployment.



---

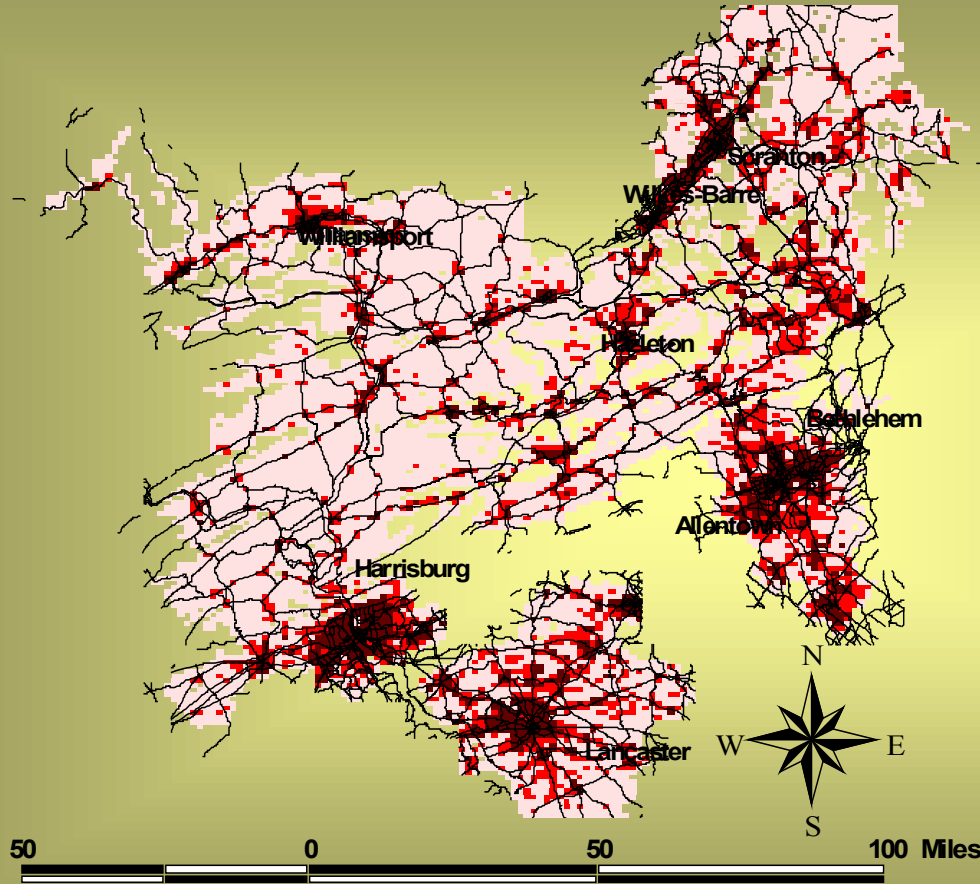
**How much are you going to spend building internal translation system(s) because different vendors' AMR products don't deliver data in the same way?**

***The answer depends on how many technologies used.***



# How many AMR technologies is optimum - this drives the IT issues?

AMR Project  
of the Year  
2004  
DistribuTECH



Does the optimum  
AMR system have  
1, 2, 3 or more  
technologies?

# What is 'optimum' and how does it affect IT?

---

- Customer density is the key issue
- Technical optimization
- Economic optimization
- Operational optimization
- Customer equality

# What is a typical level of effort at utilities with AMR for the deployment?

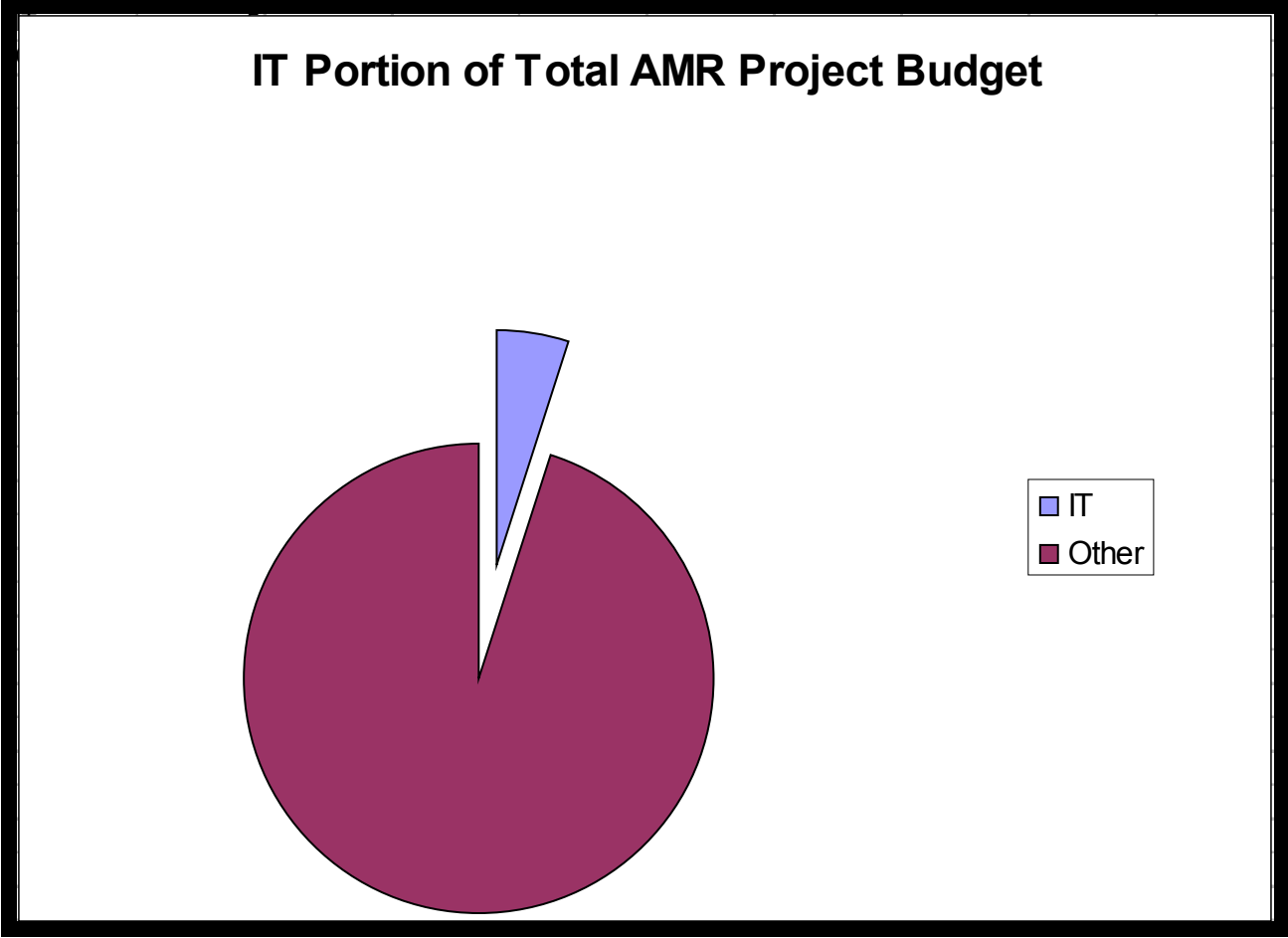
- These are utilities with over 500,000 AMR meters
- Utility # 1 - 11 people, 9 months
- Utility #2 - 9 people, 6 months
- Utility # 3 - 12 people, 11 months

## *What are the System Integrators saying?*

- *40 people, 2 years*
- *35 people, 3 years*

## *Why?*

# IT's importance in AMR is not proportional to its budget participation.



# How to address the CIS and billing needs.

---

1. Rule #1 - DO NOT TOUCH CIS

2. Rule # 2 - DO NOT TOUCH CIS

3. Rule # 3 - **DO NOT TOUCH CIS!**

4. **One client's experience:**

- CIS supplier wanted \$40M to revamp a 2 year old CIS
- CIS did not readily scale to meet the opportunities enabled by AMR
- Recommendation alternative...

---

How much bandwidth are you going to need to backhaul  
all your AMR data?

# Not much...

---

- Bandwidth
  - system wide
  - individual lines
- Example
  - 1.3 M meters
  - Hourly reads with 3 daily messages
  - 300 WAN links
  - Offered traffic = 200B per message x 3 x 5,000 meters = 3,000KB
  - *BUT, AMR is not a major telecom bandwidth burden!*

---

What new applications will be necessary to support to get the maximum value from your AMR systems?



# Depends

---

- CIS
- Asset tracking
- Meter data management
- Cross dock
- New uses
  - engineering
  - call center
  - billing

---

How will all this change next year?

# Not much

---

What would drive change?

- Deregulation
- Unbundling
- More data intensive applications
- More applications

# Summary

AMR Project  
of the Year  
2004  
DistribuTECH

## For more information:

- **Michael Wiebe**
  - Tel: 404.915.4991
  - Email: [mwconsulting2@yahoo.com](mailto:mwconsulting2@yahoo.com)
  - Office **[New]**:
    - 3201 NE 183 Street, Suite 2005
    - Aventura, Florida
    - 33160

