



# Smart Meter Data Management

**Your world is about to change....**

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Newmarket – Tay Power Distribution Ltd.

# MDM/R Session

- Who we are....
- Current state.....
- Things to think about.....
- Ask questions.....



# The Utility

- Two part service area
  - **Town of Newmarket**
  - **Part of Township of Tay**
- **Newmarket**
  - **35 km north of Toronto**
    - Large commuter component
  - **26,000 customers**
- **Tay**
  - **Population density of less than 5 per hectare**
    - More than doubles in summer months
  - **Southeast shoreline of Georgian Bay**
  - **5,000 customers**

# Newmarket – Tay's SM Solution

## Present Status

- ~ **29,000 meters deployed**
  - **Sensus Icon**
    - 24,000 in Newmarket
    - 4,000 in Tay
  - **Elster – Sensus (FlexNet)**
    - 700 in Newmarket (General Service)
- **IESO MDM/R**
  - Began working with IESO in Jan 2007
  - 1<sup>st</sup> Billed Quantities "Production" March 2008

# **Newmarket – Tay's SM Solution Present Status**

- **Currently billing TOU ~ 26,000 customers,**
- **Roll over ~ 1,000 – 1,200 per month**
- **Residential all done, end of September**
- **Fall, Education Campaign – GS**

# Present Status MDM/R

- MDM/R 'Production'
  - MDM/R responding to all data withdrawals and data deposits
  - Billing and synchronization functions fully operational
  - LDC business process redesign completed



–“ By mid November, fully MDMR integrated for billing all TOU customers”.

# The Implementation Plan

- 2006
  - Selection of technology vendor for Automated Meter Infrastructure (AMI) and contract preparation
  - Start up of public awareness campaign
- Spring/Summer 2007
  - Meter installation, AMI, network and systems testing
    - Shift public awareness campaign into high gear
- Fall 2007
  - Declaration of mandatory TOU
  - Migration of consumers to TOU pricing
    - Web site activated, access to all customers,
    - Introduction package

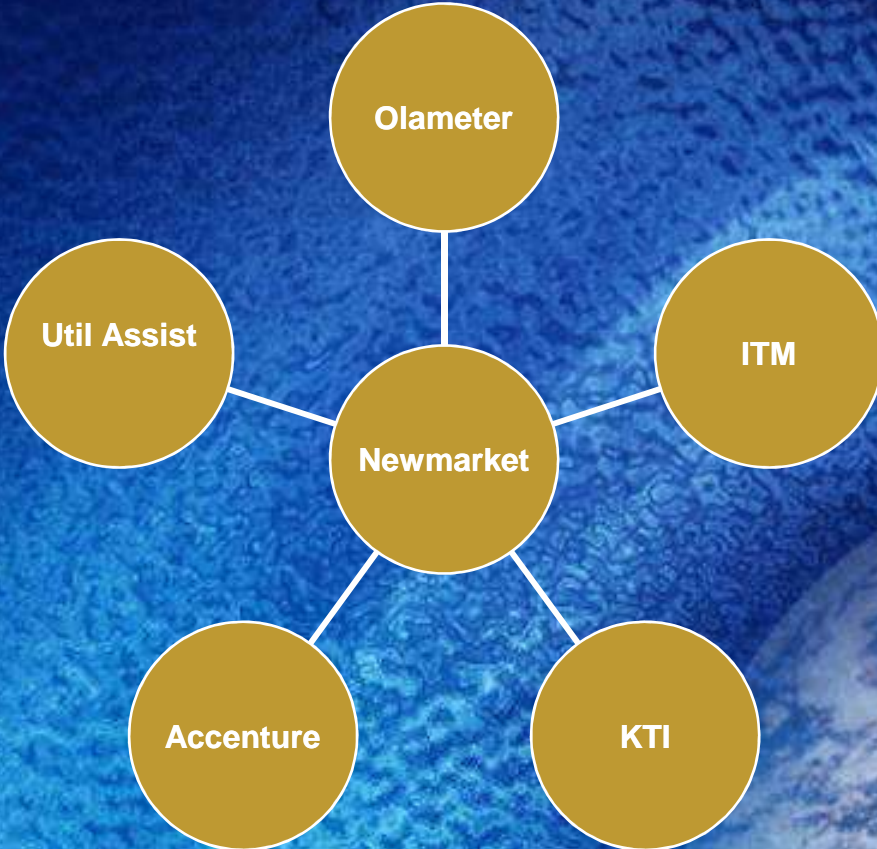
# The Challenge

- **Could not do it our selves,**
- **Requires cross functional “team effort”**
- **Strong support & significant resources...**
- **Weekly meetings, nothing to small to consider,**

# The TEAM



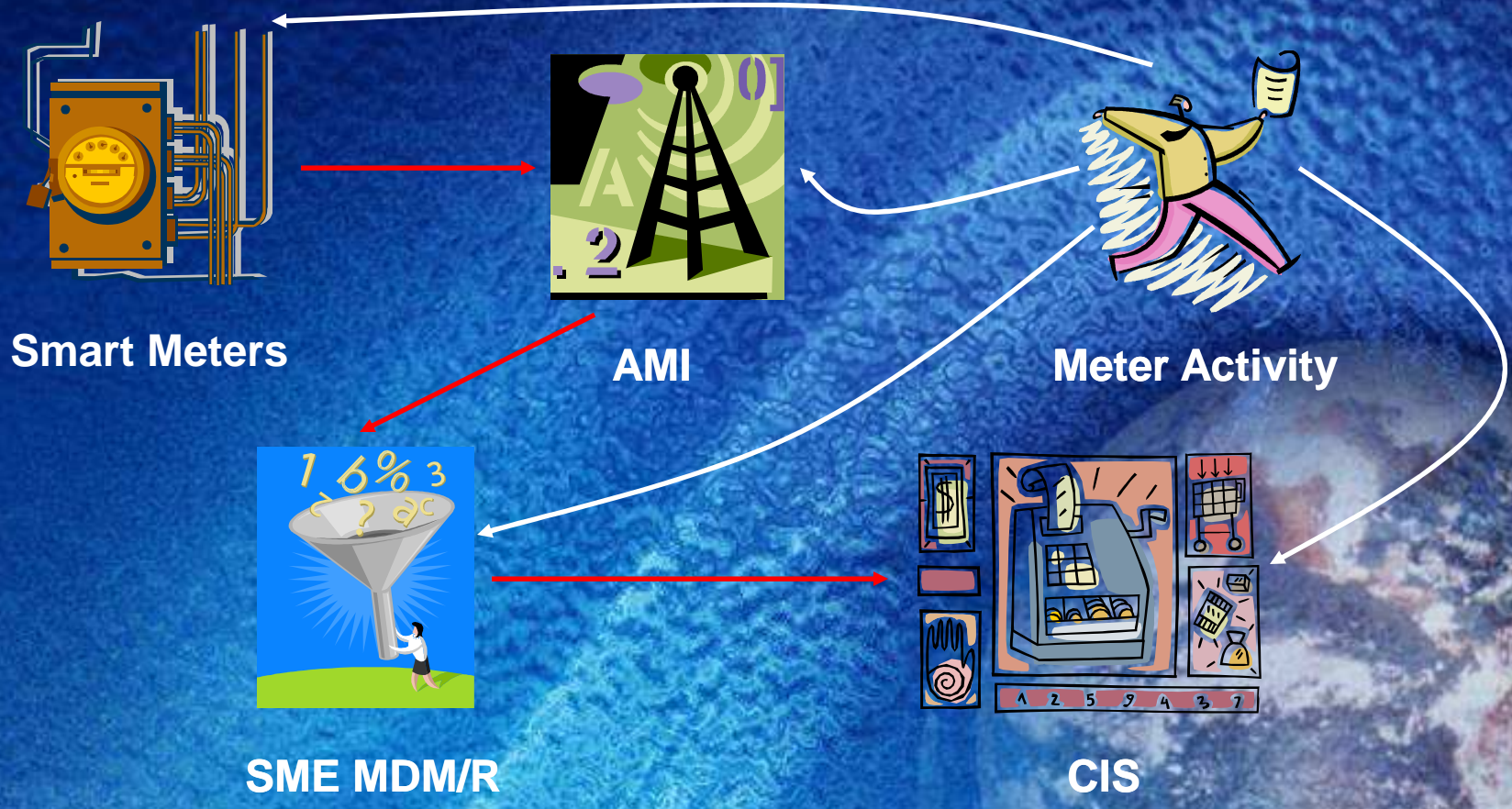
# The TEAM



# 4 Key Aspects .....

- **Meter procurement & deployment**
- **Management of the AMI network**
- **Business process review, impacts entire organization**
- **MDM/R integration/production**

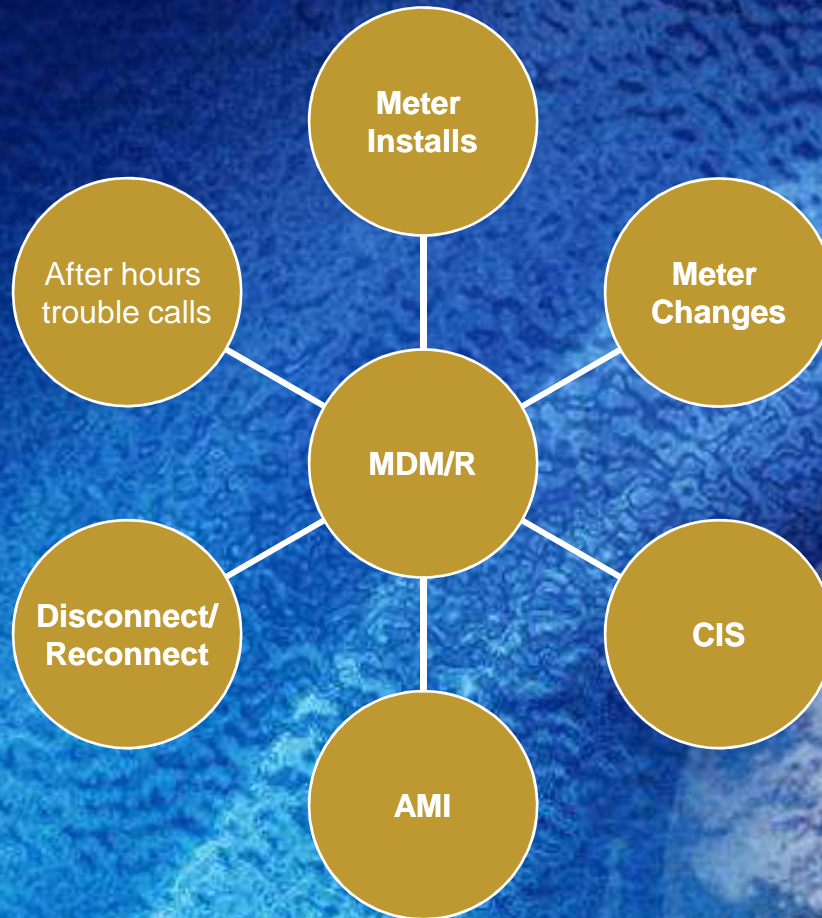
# Smart Meter Management



# Managing the AMI

- **Conventional meters were ‘Self – Healing’**
  - If removed or power lost, they stopped
  - If re-installed or power restored, they started
    - ... and no one noticed
- **Smart Meters are also self – healing, BUT**
  - The AMI and MDM/R will notice all exceptions!
- **Real time asset management essential**

# Some Meter Processes to Think About

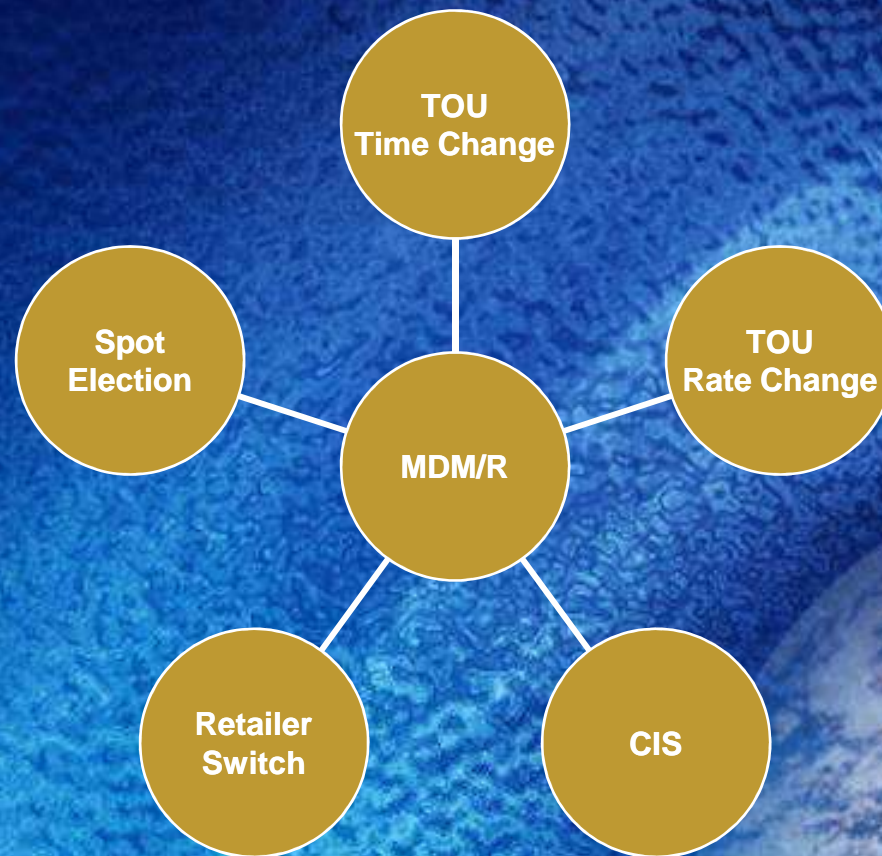


# Work Force Management

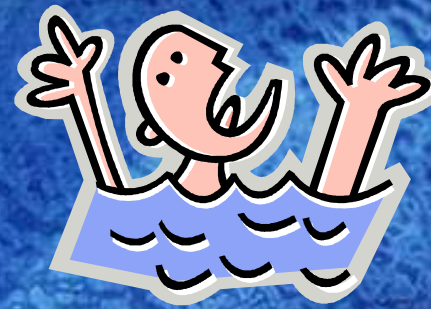
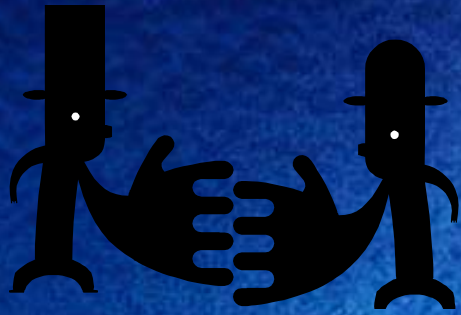
- Paper or automated?
- Own or contract?
- Meter staff implications
  - AMI - MDMR requires a higher standard of care
    - Database synchronization
    - Exception management
    - **All** meter activity must be reported



# ... and Some Billing Processes



# The Business Processes



To Synch .....or Sink?

# GOAL

- **Electronic meter work orders.....**
  - same day update of MDM/R and AMI for every meter touched

# Exception Reports – Day 1



# MDM/R Enrollment



# MDM/R Enrollment

- Great deal of resource material available.....”guide to testing & cutover is a must read to get started”
- IESO assigned personnel
- Experience, improvements, lot of bugs have been worked out

# MDM/R Enrollment

- **Connectivity Testing**
- **Unit Testing (optional, not really)**
- **System Integration Testing (SIT)**
- **Qualification Testing (QT)**
- **Cutover**

# Connection

**AS2 Client**  
**FTP Site**

# Unit Testing

- Validate communications
- Validate file structures
- Preliminary testing of new business processes
- “Well worth doing” .....

# SIT and QT

- Real work begins.....
- Daily uploads of files.....
- Test all interfaces with MDM/R
- Complete meter to bill life cycle
  - Meter readings, metered data
  - Request for billing quantities.....
  - Generation of exception reports.....
  - Complete testing of interface.....

NOTE: all hands (AMI, IT, CIS,) must be on deck and be prepared to allocate time/effort for this portion.

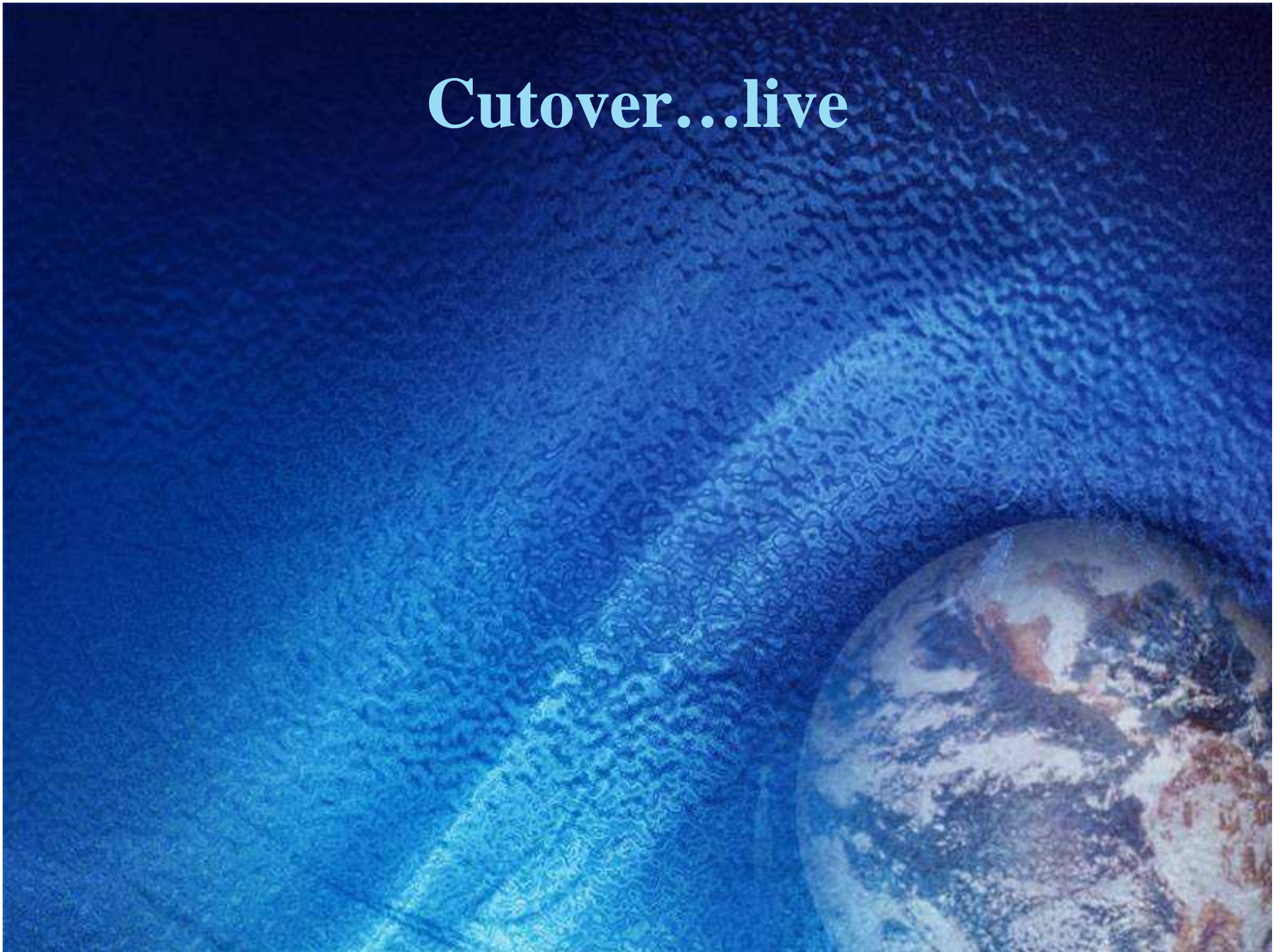
# SIT and QT

- End to end testing.....
  - Run 4 short billing cycles – 1 month
  - QT Testing team,
  - Confirm navigation through GUI.

NOTE: time consuming.....

NOTE: all hands (AMI, IT, CIS,) must be on deck and be prepared to allocate time/effort for this portion.

**Cutover...live**

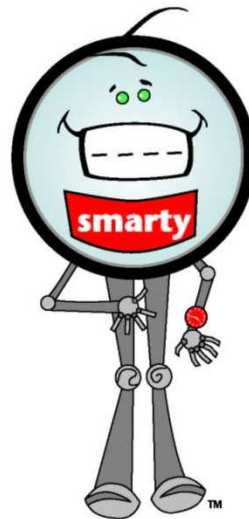


# Cutover...live

- Cutover to production does not mean conversion to TOU
- Cutover strategy (review/approved)
- Self certification – cutover readiness
- All systems components are used....

“all hands on deck”

# Thank you



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