



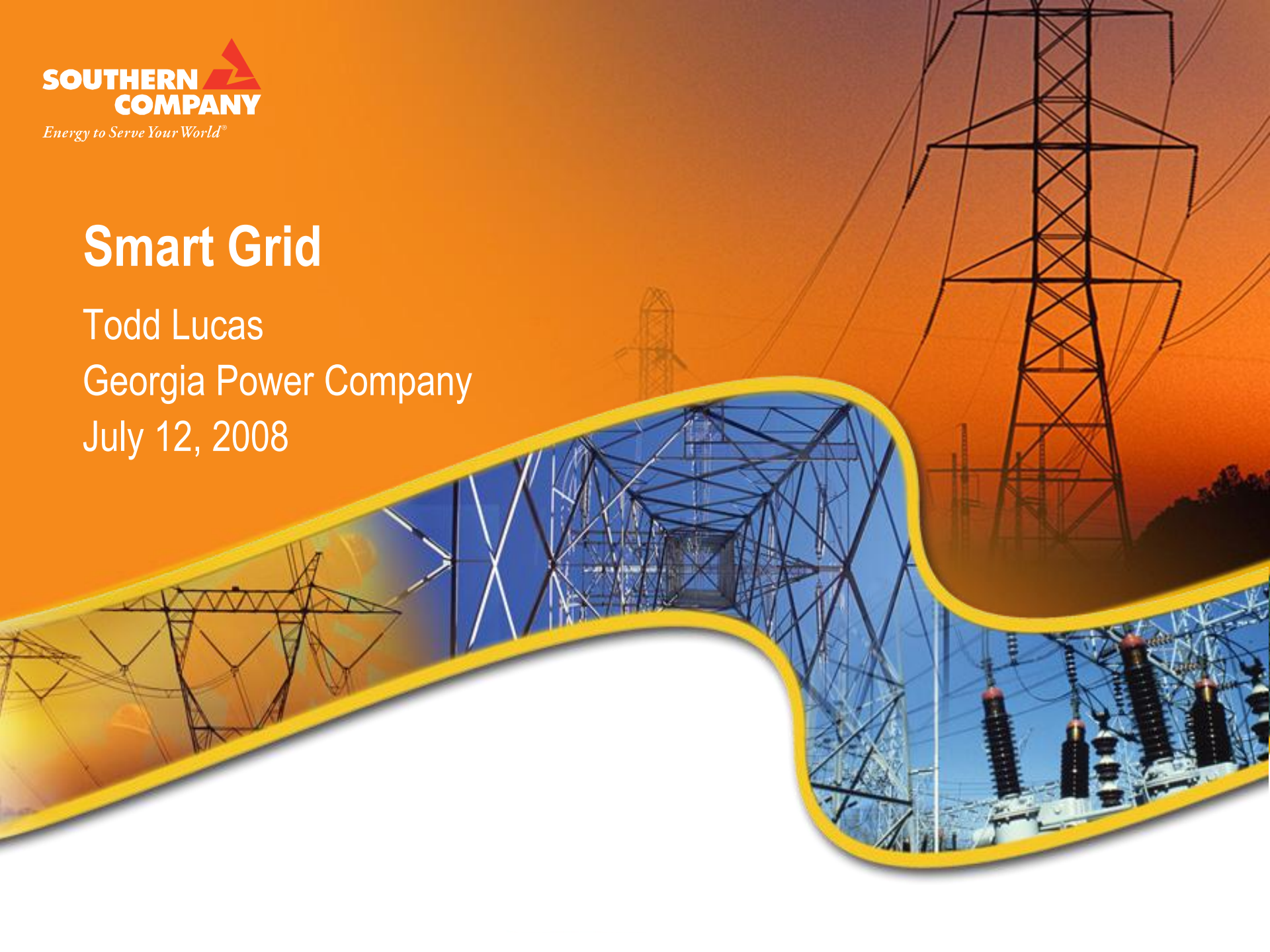
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# Smart Grid

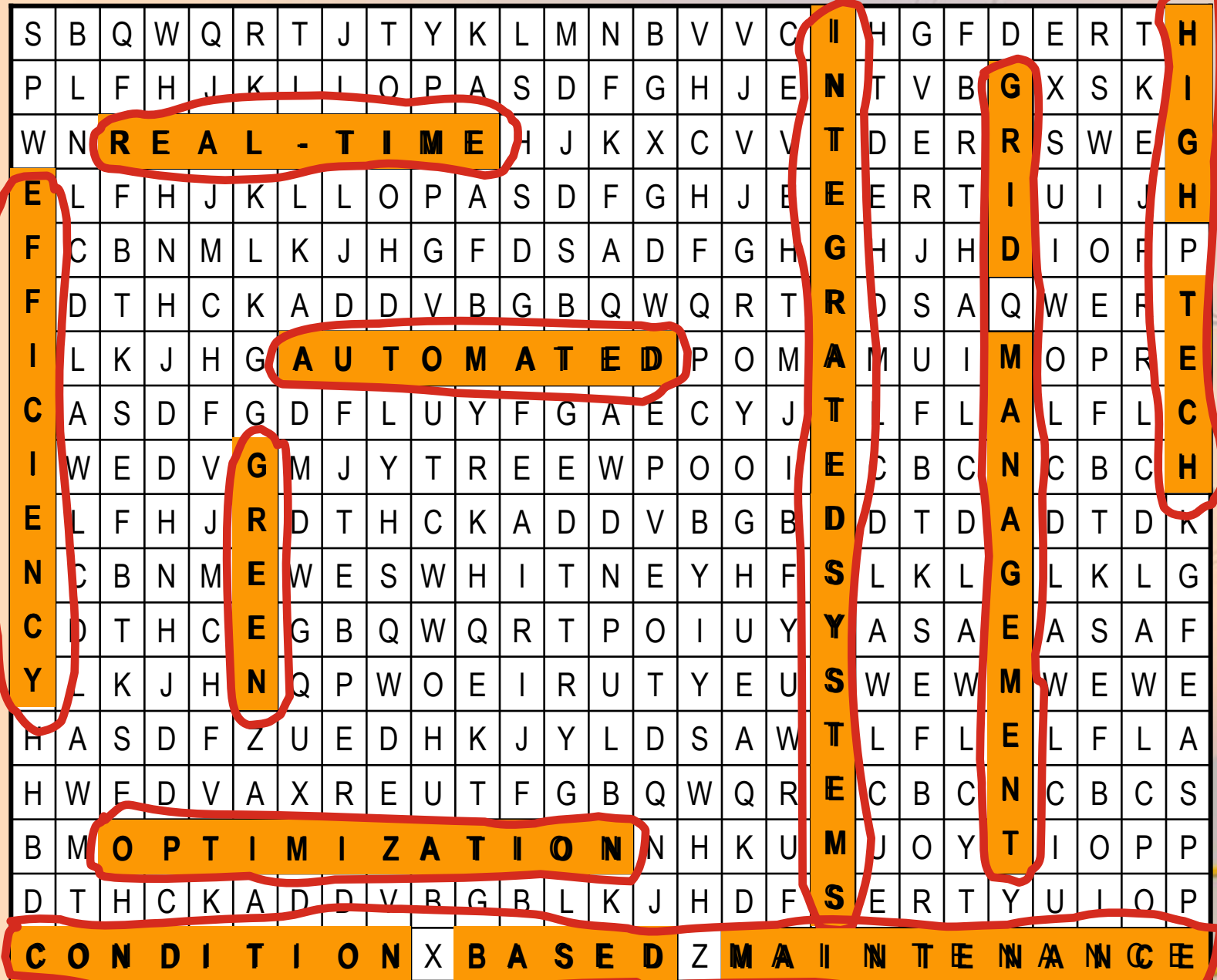
Todd Lucas

Georgia Power Company

July 12, 2008

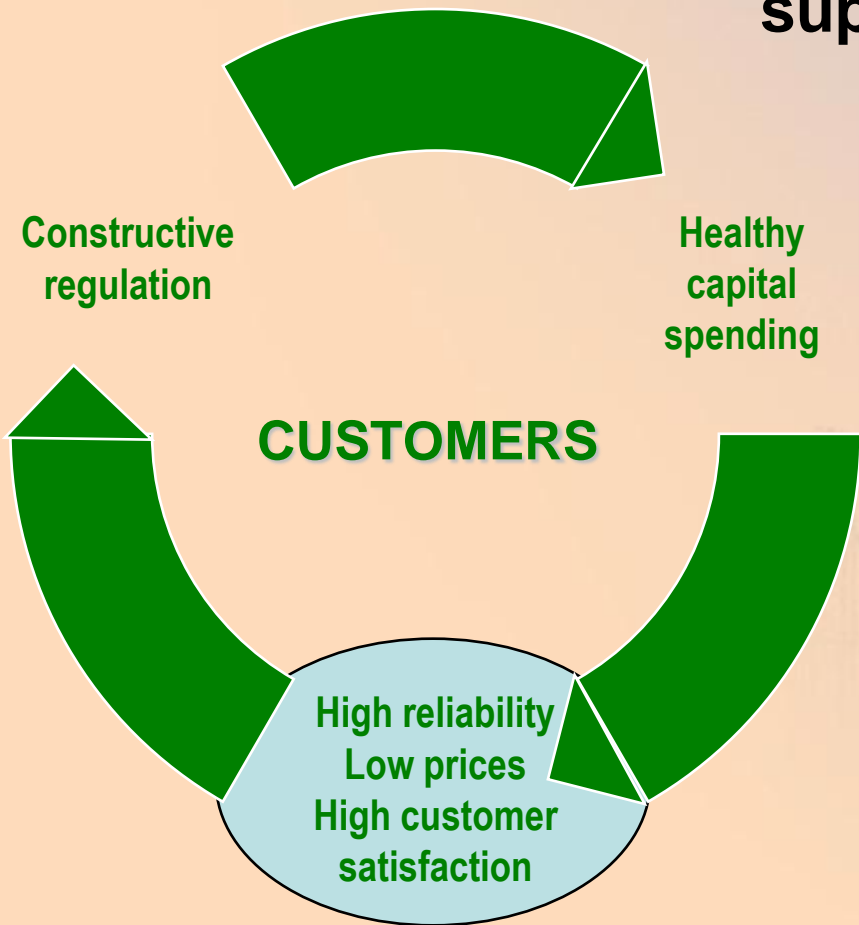


# What is Smart Grid?



# Philosophically speaking...

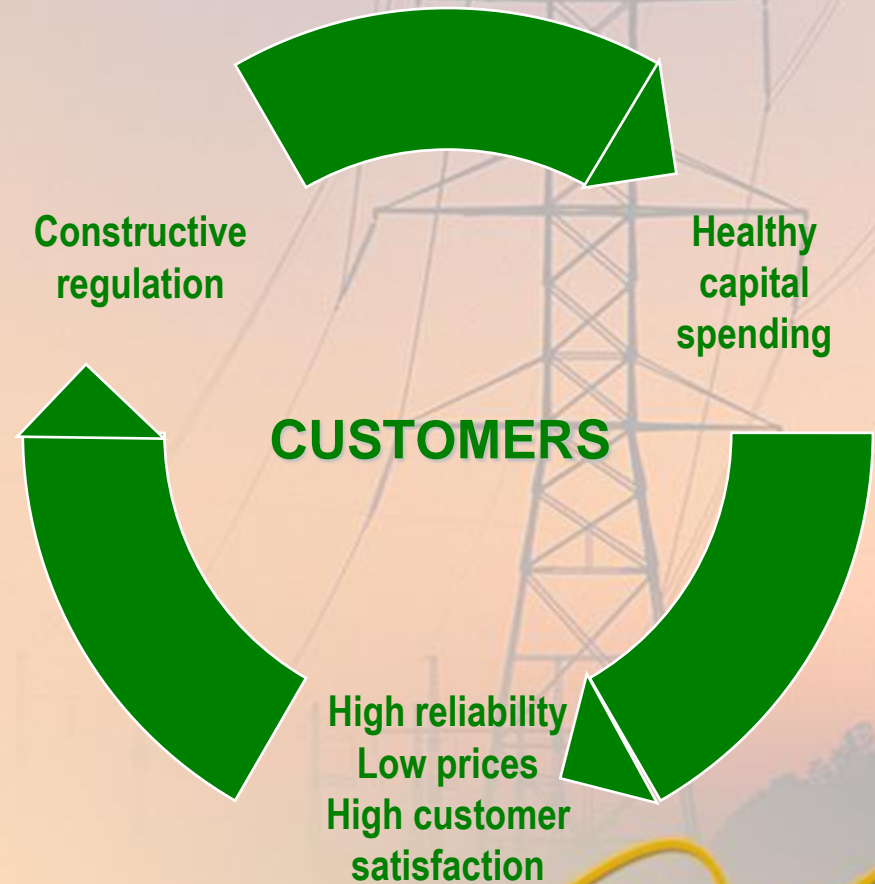
**Smart Grid activities must support the Circle of Life**



- **Growing societal demands for energy efficiency**
- **Rising cost environment**
- **Growing expectations for low cost / high reliability**

# Southern Company Direction

- **Creating the Southern Company Smart Grid definition**
- **Cataloging current technology use and pilot programs**
- **Developing long term strategic direction for a comprehensive utilization of existing and emerging technology**

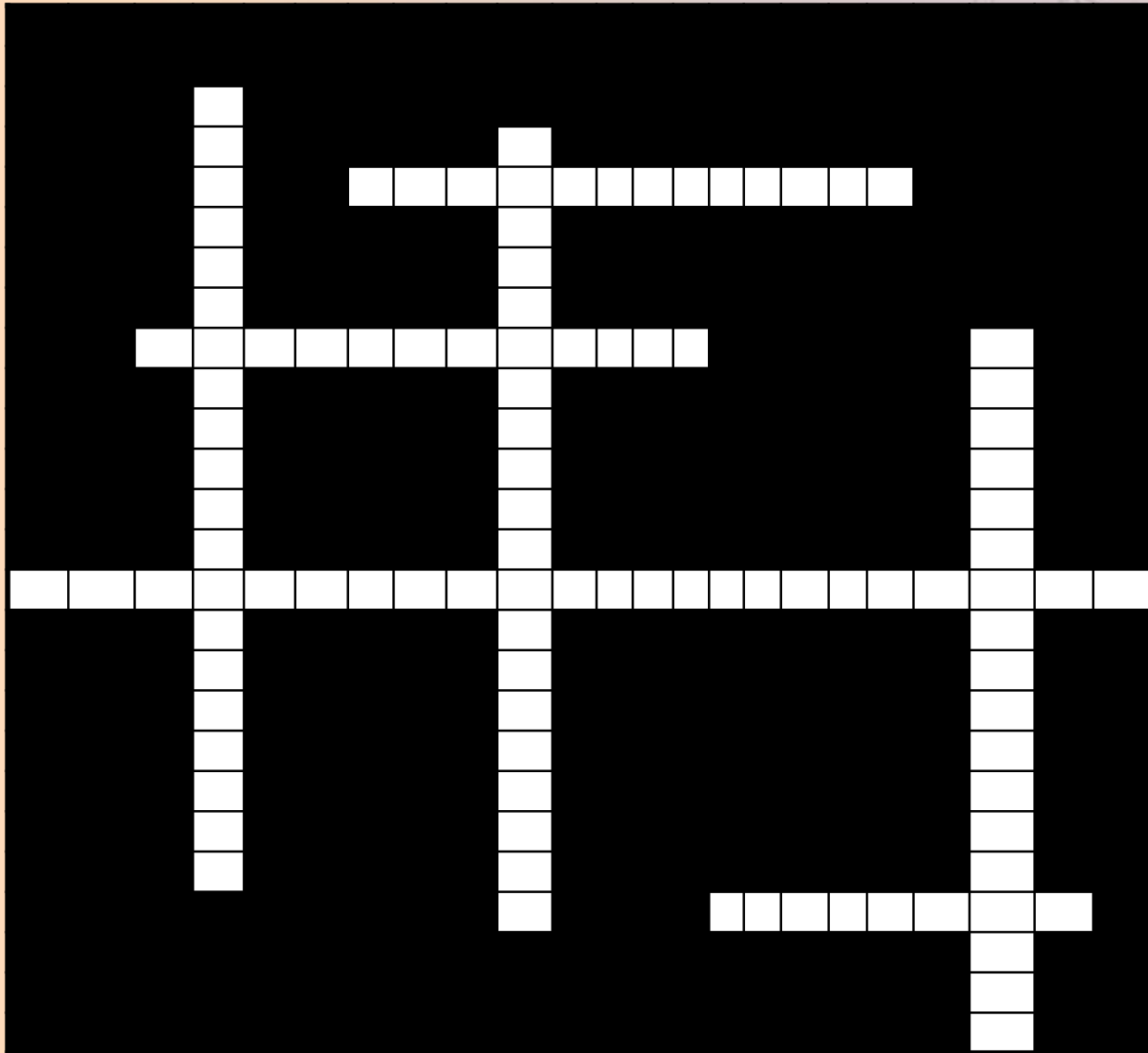


## Definition:

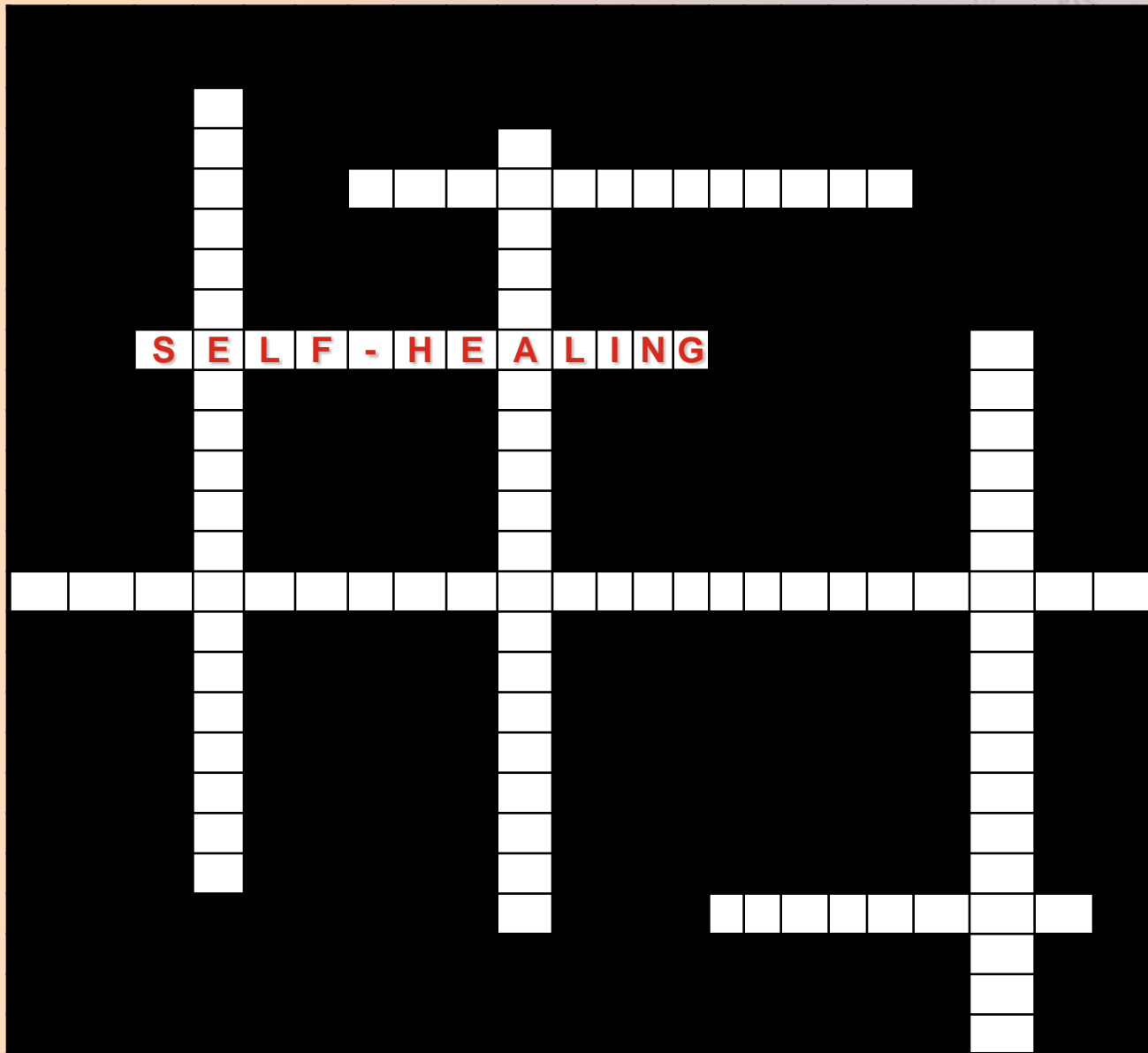
**Smart Grid** (smärt grid) n., a seamless, telecommunication enabled power delivery system utilizing electronic data and other enabling technologies to optimize system performance, reliability, and the customer's experience.

**Smart Grid...** *“Southern Style”*

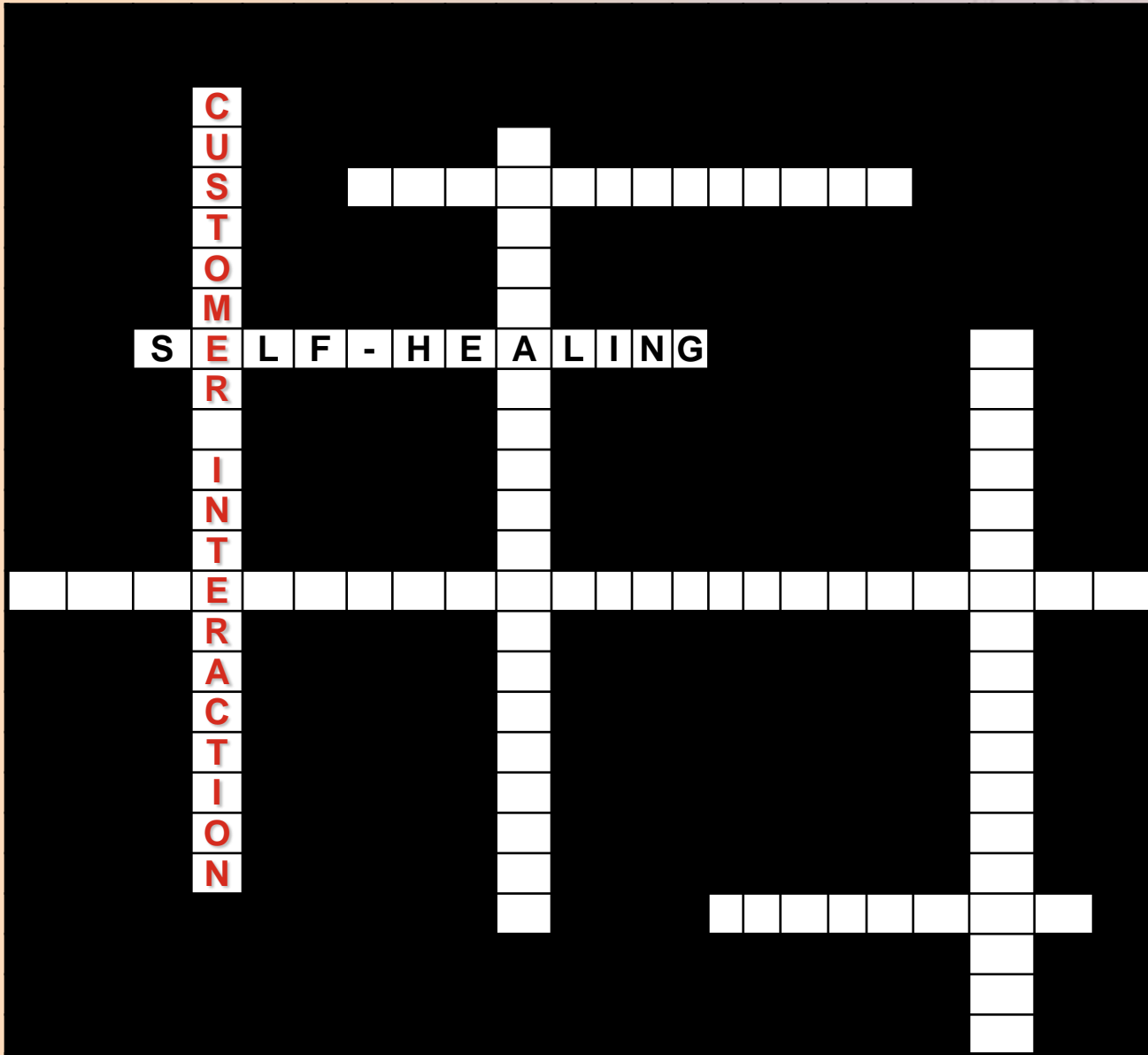
# Smart Grid Characteristics



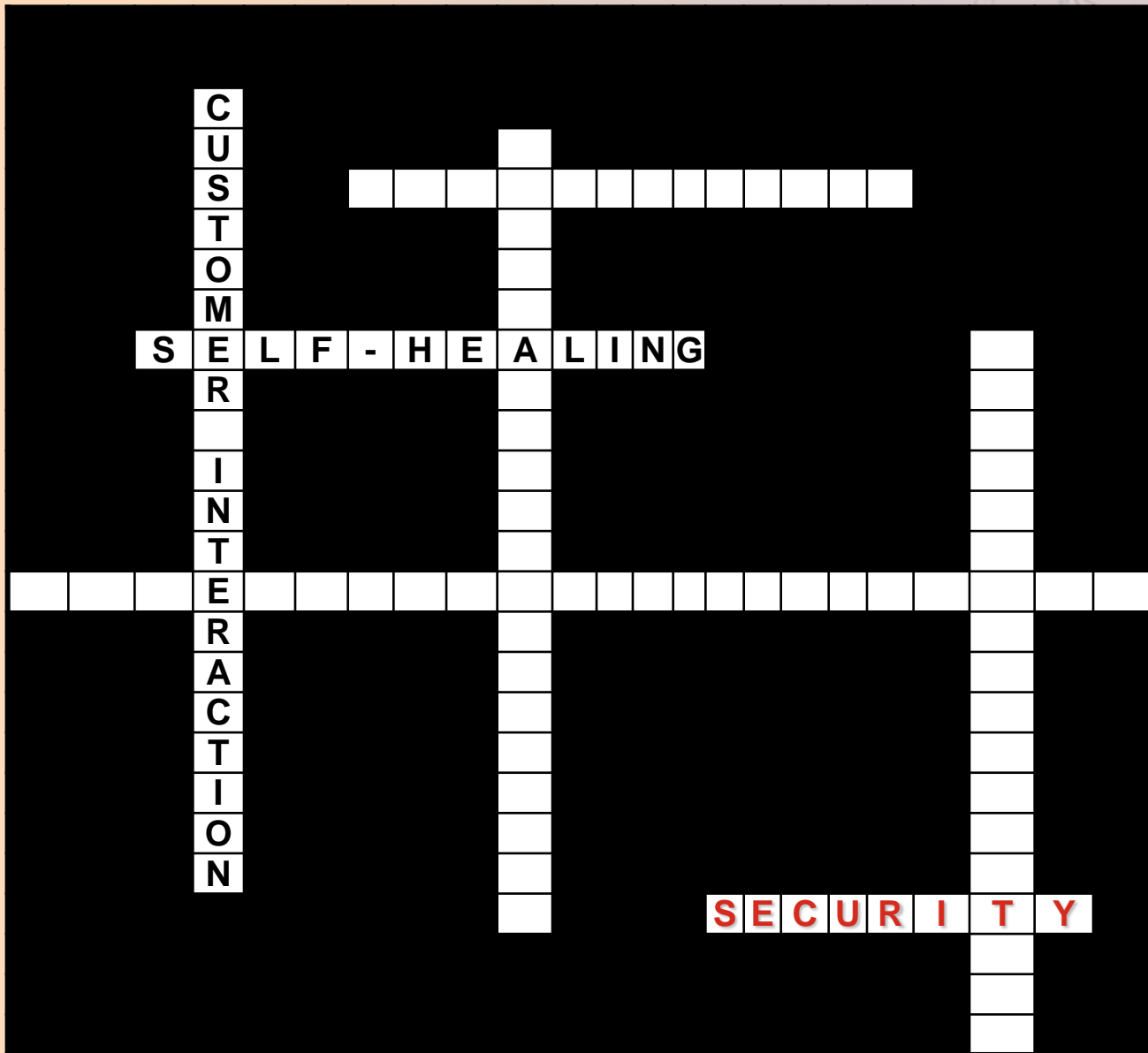
# Smart Grid Characteristics



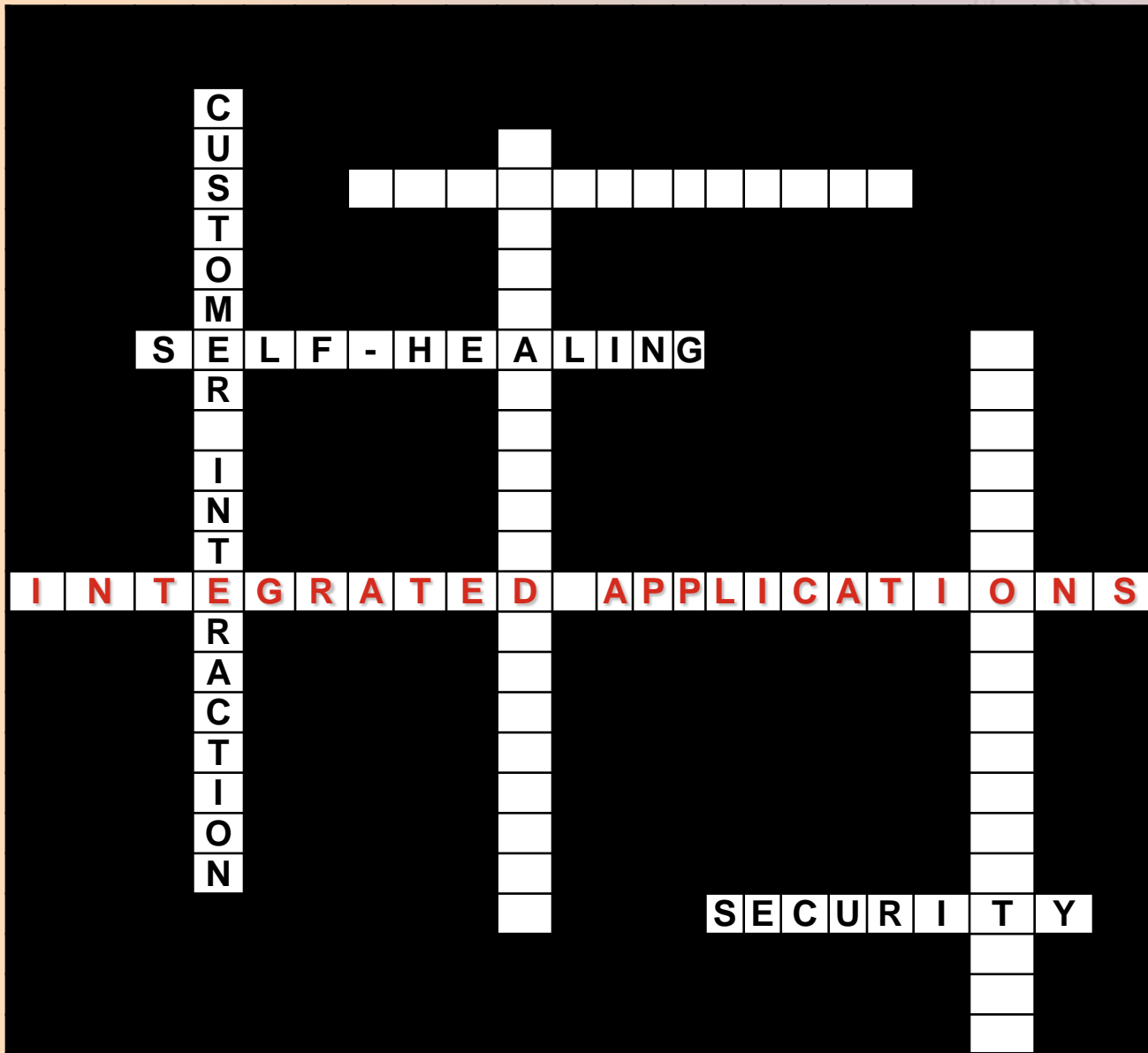
# Smart Grid Characteristics



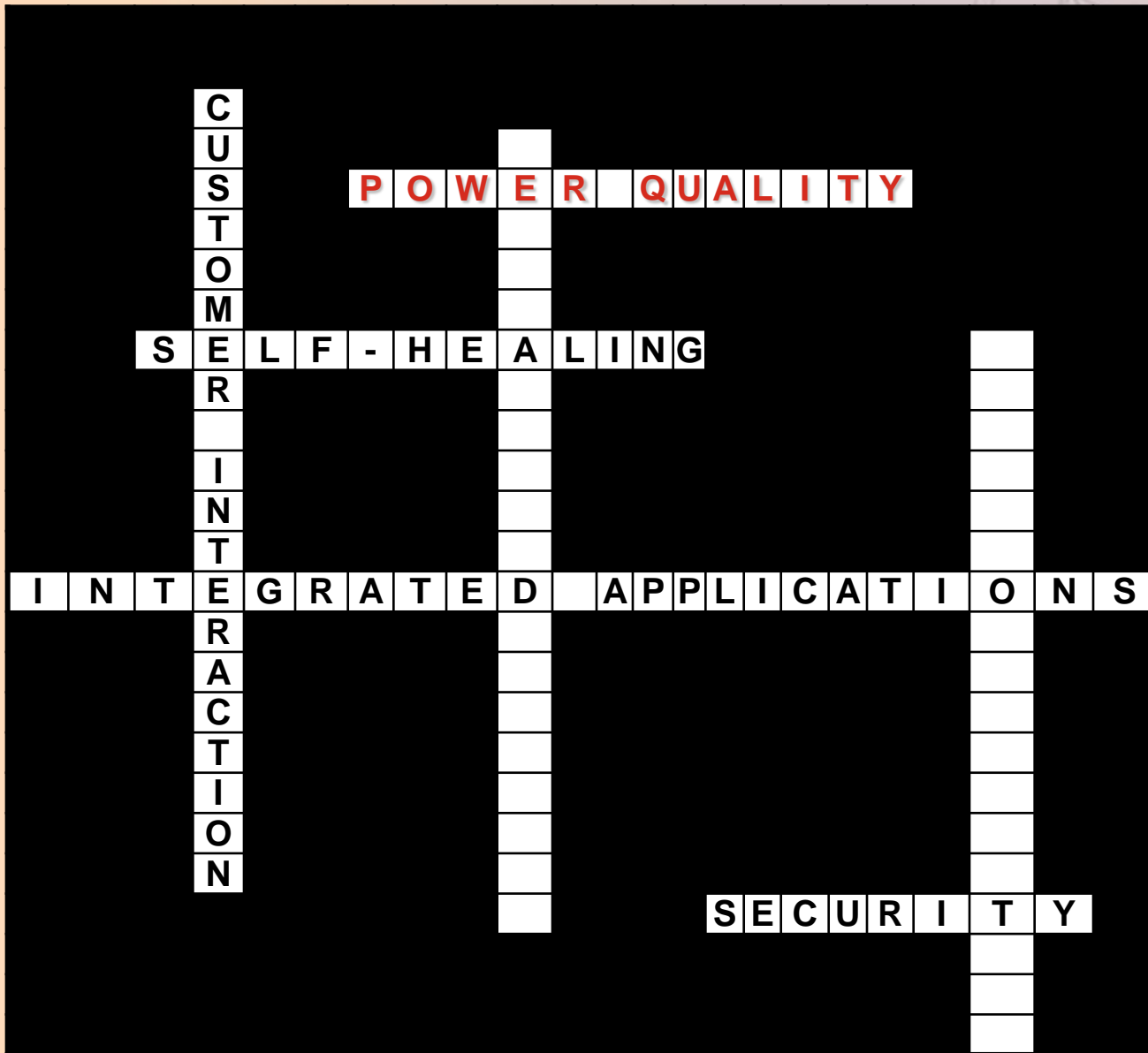
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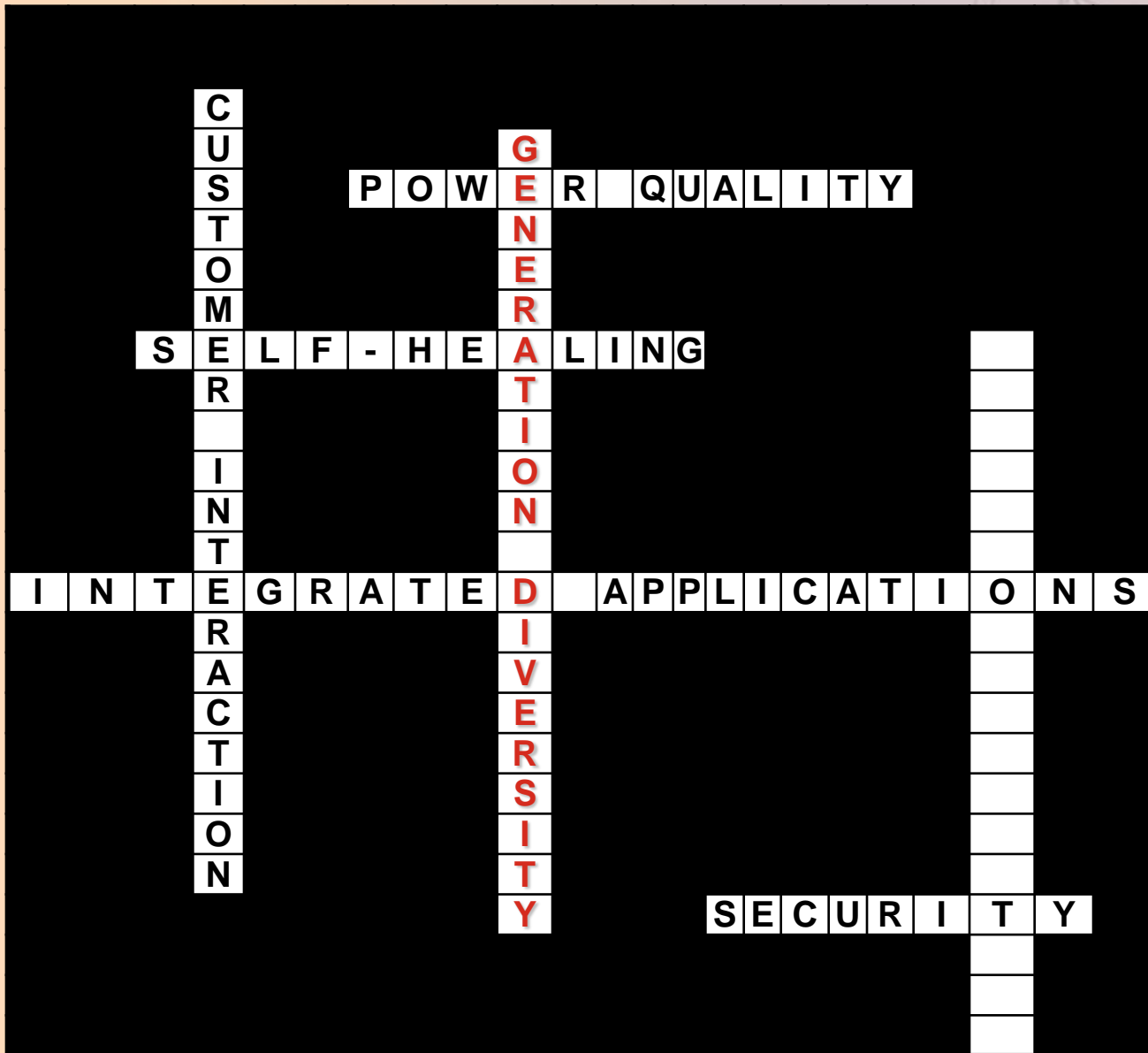
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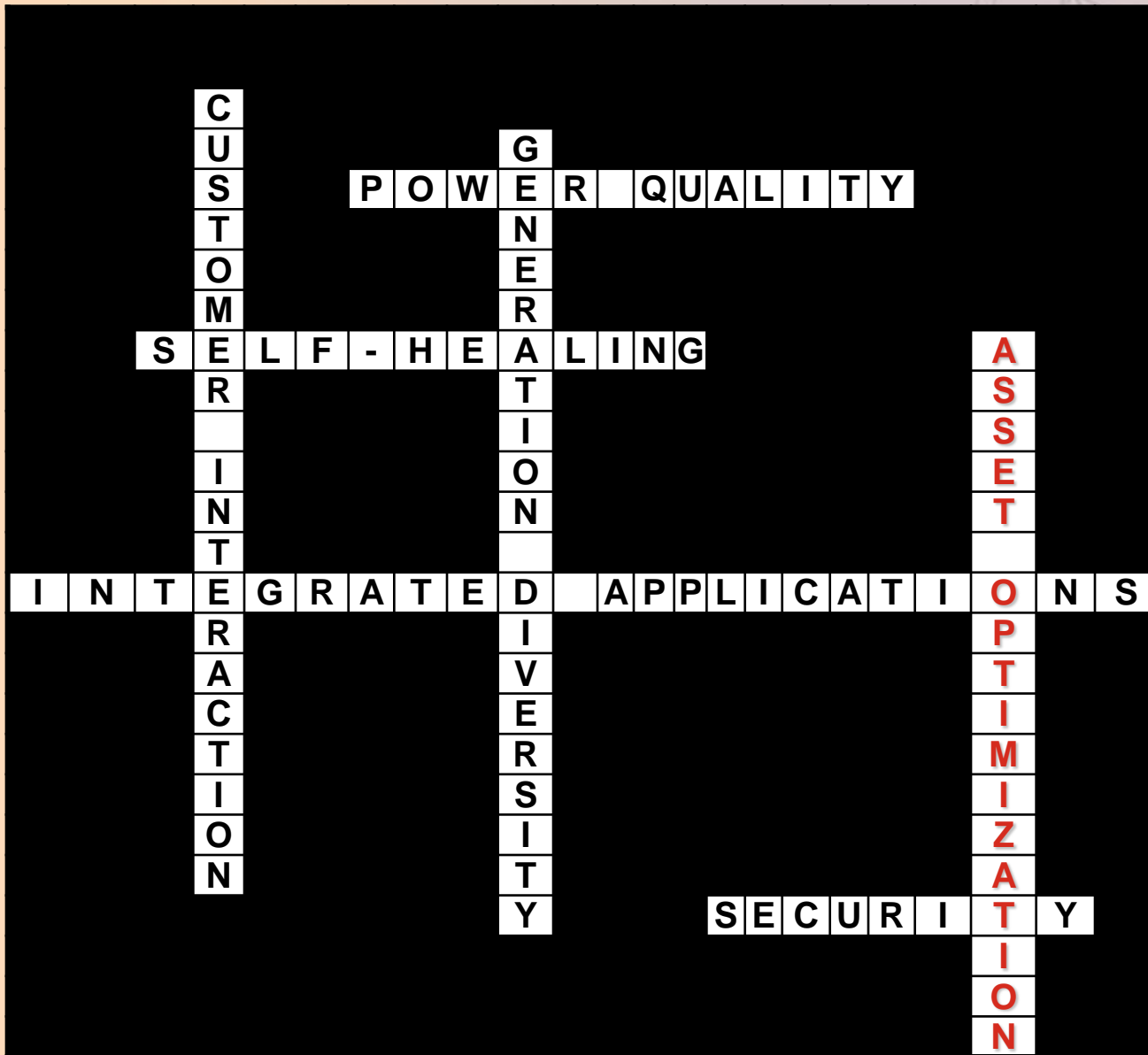
# Smart Grid Characteristics



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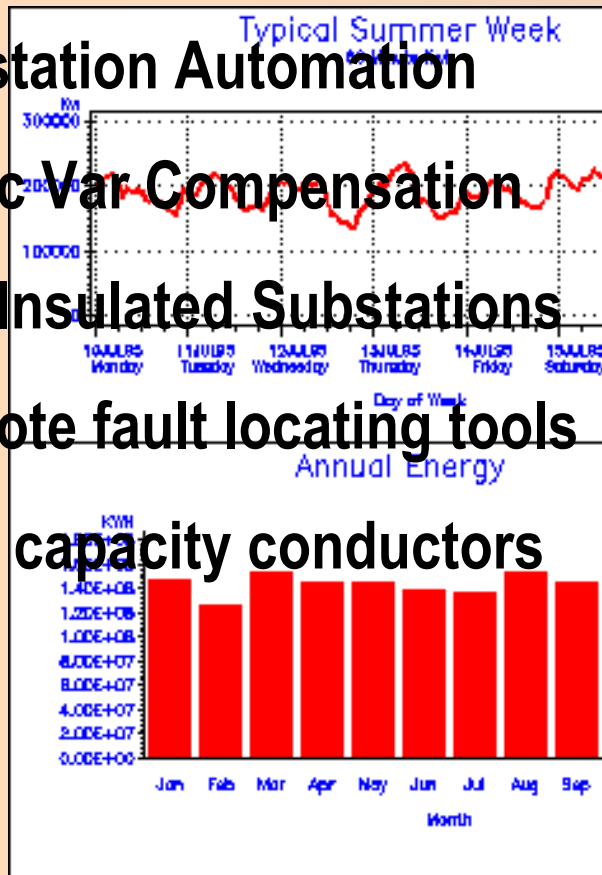


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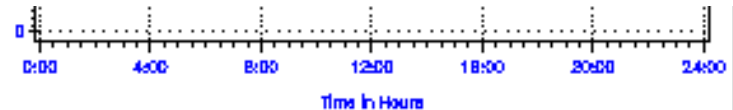
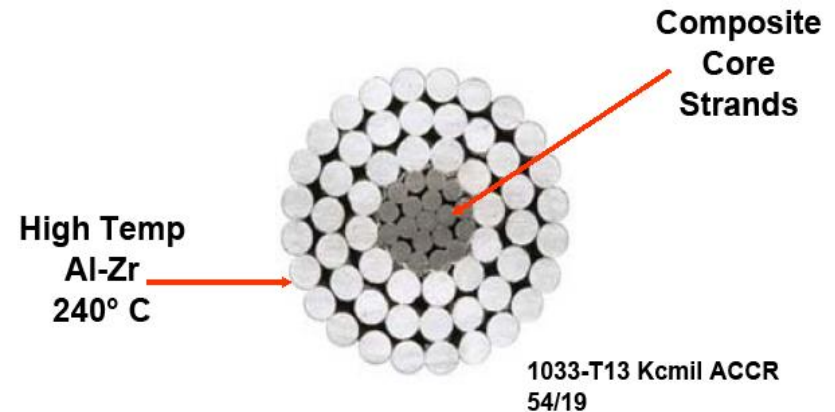


# Sample of Technology in Use Today

- Advanced Metering Infrastructure
- Real Time Pricing options
- Remote control of field devices
- Substation Automation
- Static Var Compensation
- Gas Insulated Substations
- Remote fault locating tools
- High capacity conductors



## Composite Conductors



# Emerging Applications

- Automated fault location
- Automatic fault isolation and restoration
- Condition-based maintenance
- Integrated applications
- FACTS technology
- Interaction with “Smart Appliances”
- Energy storage (plug in hybrid vehicles)
- Plus...



# Critical Issues Going Forward

- Cutting through the rhetoric
- Identification of on-going activities
- Security
- Benefits and Costs



# Summary

- Long term strategy under development
- Currently utilizing technology in many parts of our business
- Pursue solutions to enhance efficiency, reliability and customer satisfaction
- Smart Grid strategy should move at the “*Speed of Value*”



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# Smart Grid

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