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**Health Monitoring and Imaging System
for Concrete Structures**

Concrete Monitoring Technology

 UNIVERSITY OF WISCONSIN
PLATTEVILLE

WiSys[®]



Decaying bridges are a \$123 Billion problem

- 39% of the total 614,387 bridges in the US have exceeded their design lives.
- \$1.2 trillion Infrastructure Investment and Jobs Act (IIJA) for addressing this problem.





Current Solutions are inefficient

- State Departments of Transportation rely primarily on visual inspections
- Current non-destructive testing (NDT) methods:
 - Expensive
 - Require high technical skills
 - Disrupt traffic
 - Low sensitivity

"Uncertain accuracy in the NDT results and the time and cost involved to get the final results are the main barriers to implementing NDT on bridge decks"

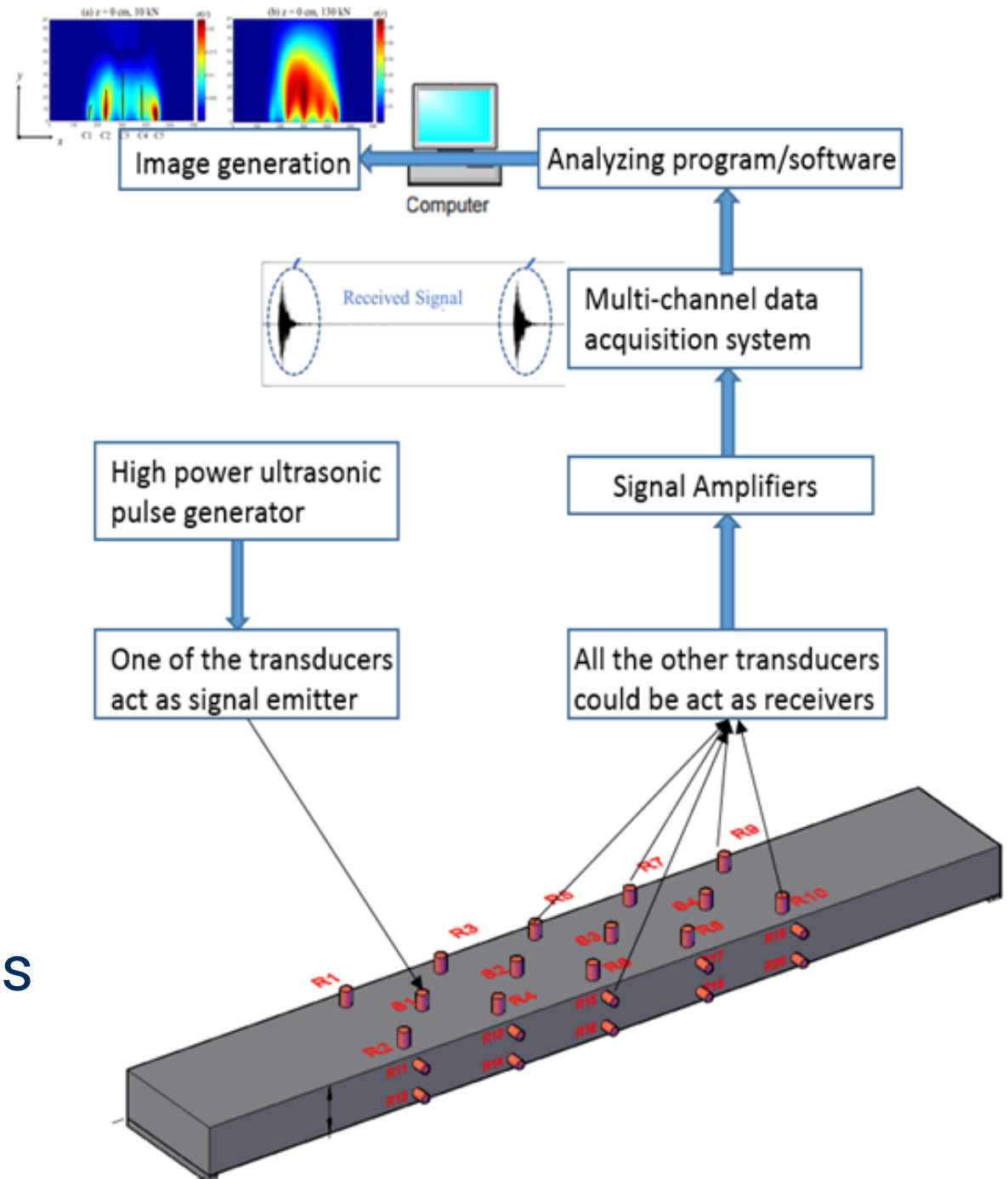
- Pennsylvania DoT

New Technology

A novel ultrasonic monitoring system

Advantages:

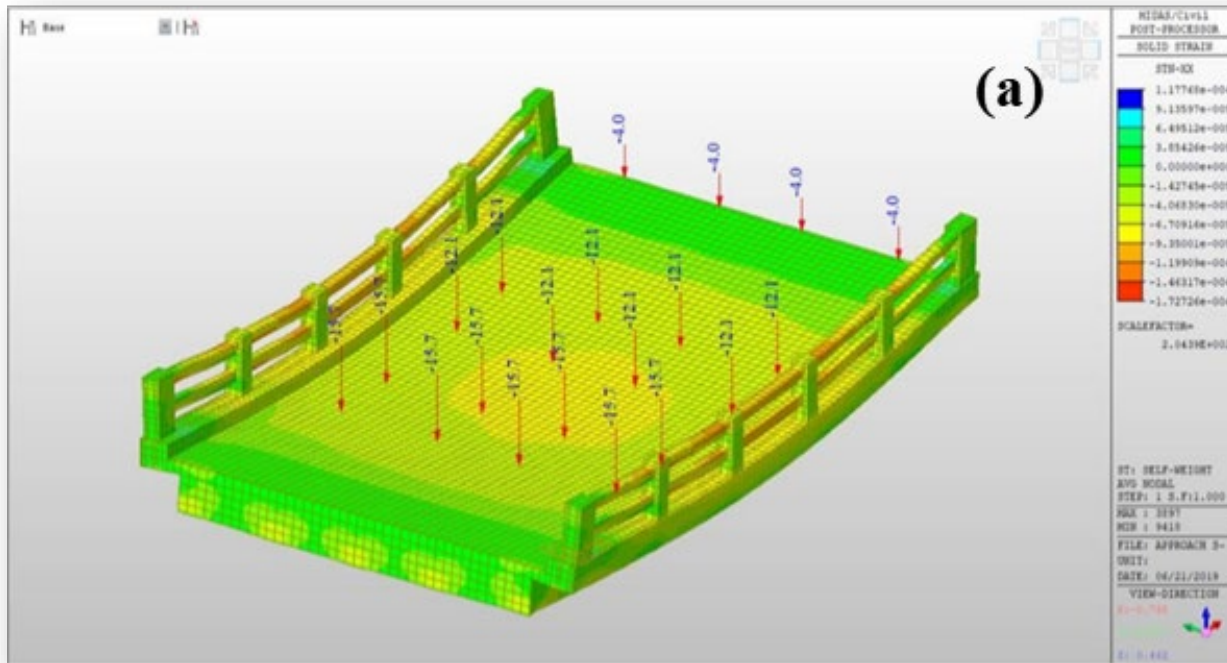
- Assess full-size, large volumes of structures
- High sensitivity
- Real-time 3-dimensional images
- Can be used on in-service structures
- Platform technology



Developed, Tested, Validated

A fully functional prototype system has been developed and both laboratory and field testing have been completed.

- US Patent pending



Field tested: Berwick Bay Bridge, Louisiana

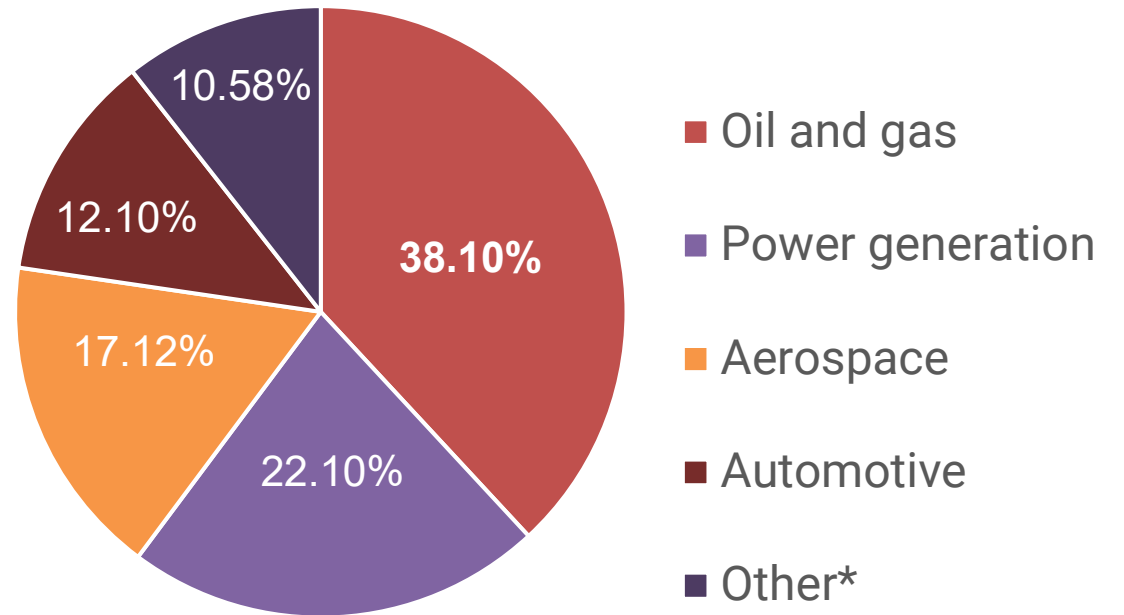
Platform Technology

**Non-destructive Testing:
\$25 Billion Market by 2026**

Other applications:

- Oil & Gas pipelines
- Powerplant inspection
- Aerospace and automotive parts
- Mining equipment
- Lithium-ion battery health monitoring

**Non-Destructive Testing
segment share (%)**



** Other includes concrete structure monitoring*

Thank you

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