

VARIABLE SPEED LIMIT CONCEPT

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December 20, 2017

The Problem

- Winter Storms
- Snow
- Blowing Snow
- Drifting
- Icy Roads
- Excessive Speed
- Fast/Slow Traffic Mix
- Crashes
- Fatalities
- Closures



Variable Speed Limit Goals

Goals

- Reduce speed when conditions warrant
- Reduce speed variability of traffic stream
- Reduce crashes
- Reduce fatalities
- Reduce road closures
- Economic benefit

Expectation

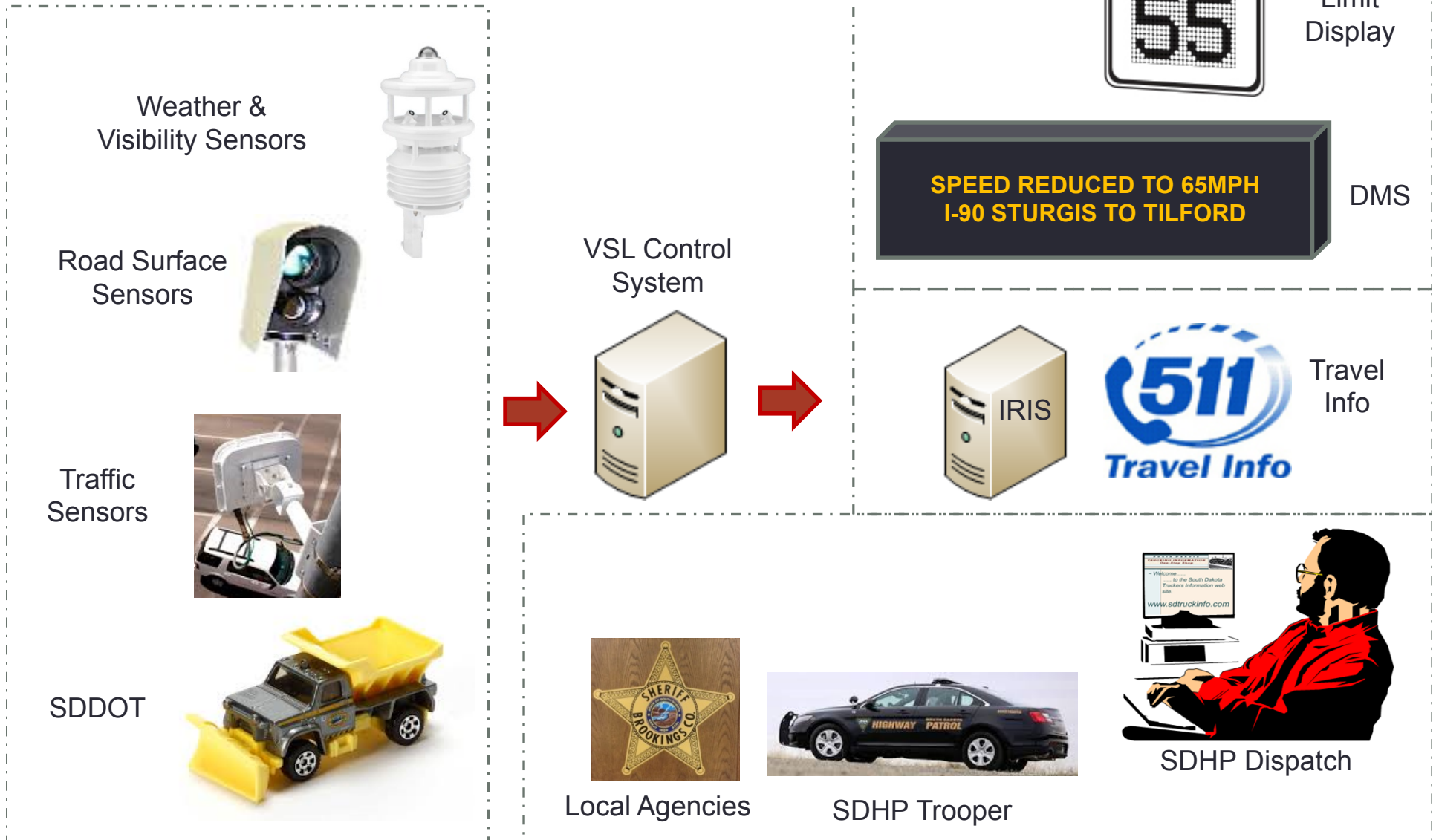
- Average speed drops ~70-80% of posted reduction
- Range and standard deviation decrease markedly
- Reduced ~1/2 in WY
- Reduced ~1/2 in WY
- Reduced ~1/3 in WY
- User savings \gg cost

Variable Speed Process

- Assess conditions
 - weather
 - road surface
 - visibility
 - traffic speed & headway
- Determine appropriate speed (down & back up)
- Post & publish speed limit
- Measure & evaluate results



VSL System Overview



Wyoming I-80 Storm Example

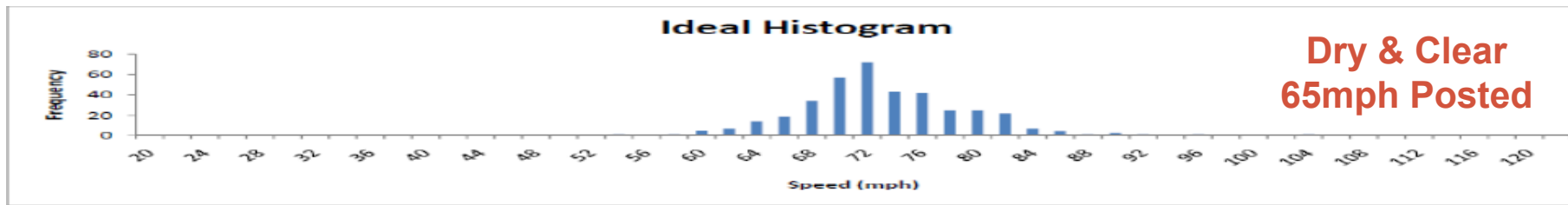


Figure 7 : Ideal histogram MP 256.25 December 1-2, 2009

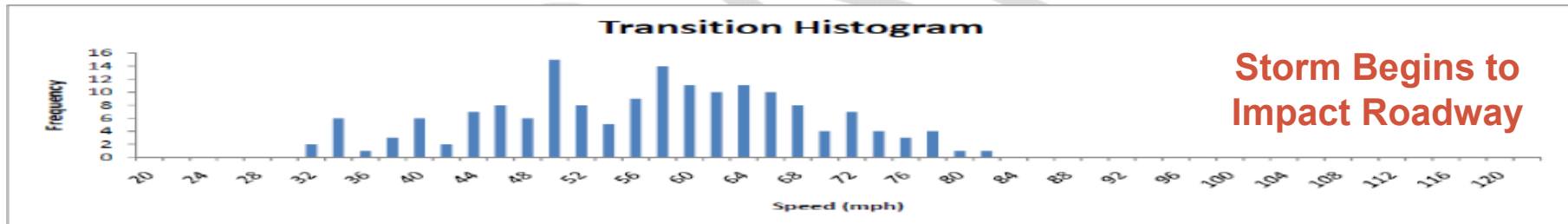


Figure 8: Transition histogram MP 256.25 December 1-2, 2009

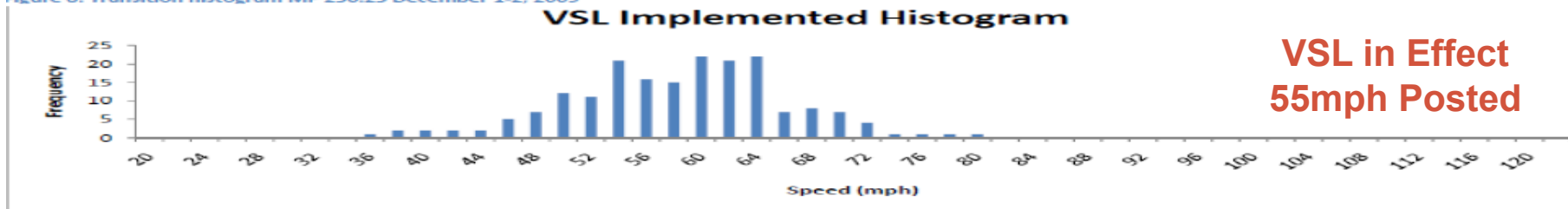


Figure 9: VSL implemented histogram MP 256.25 December 1-2, 2009

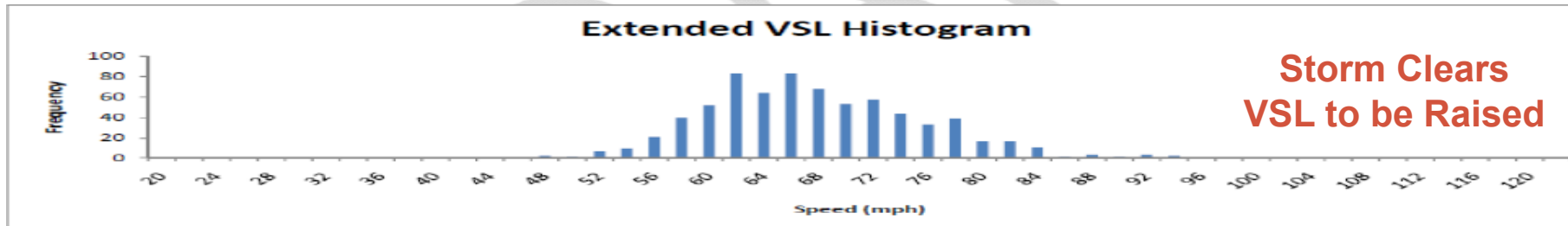


Figure 10: Extended VSL histogram MP 256.25 December 1-2, 2009

Accelerated Innovation Deployment Project



- 2018 Enabling Legislation
- 2018 Deployment
- Accelerated Innovation Grant

VSL Project Approach

- Build on other states' experience
- Assess feasibility (done)
- Systems engineering (underway)
 - Concept of Operations
 - Requirements
 - Design
 - Testing & Validation Plan
- Contract award, installation
- Formal evaluation (operation, effectiveness)
- Possible future expansion to other Interstate segments

Questions?

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Contact

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