

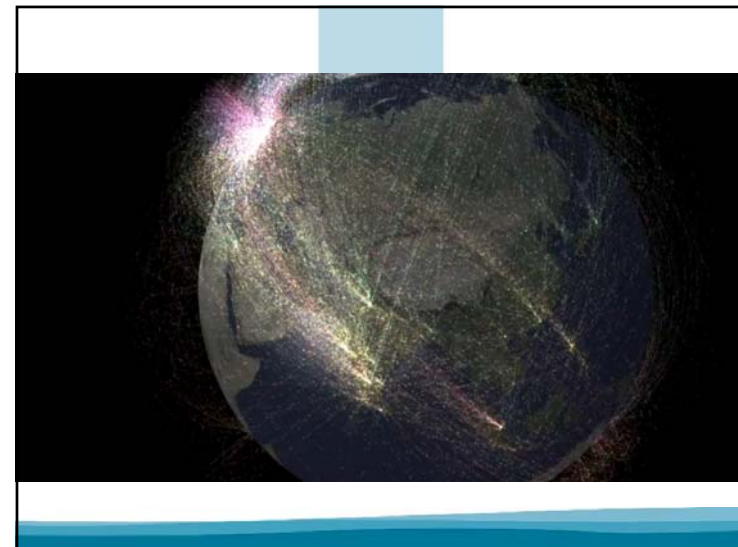
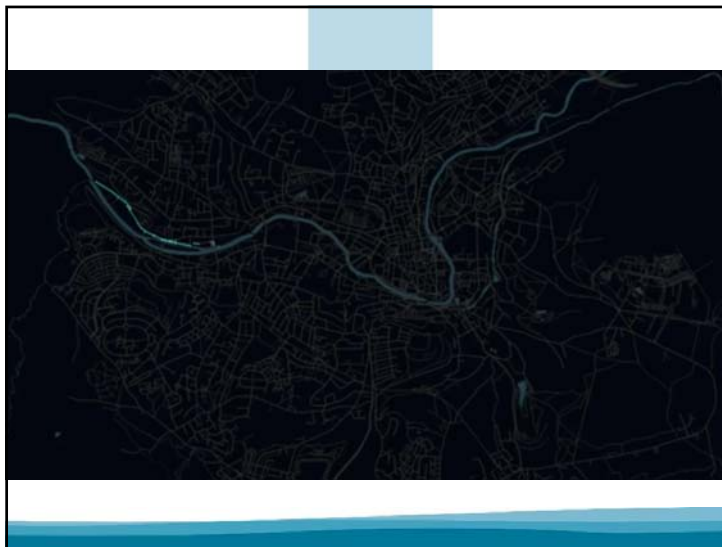


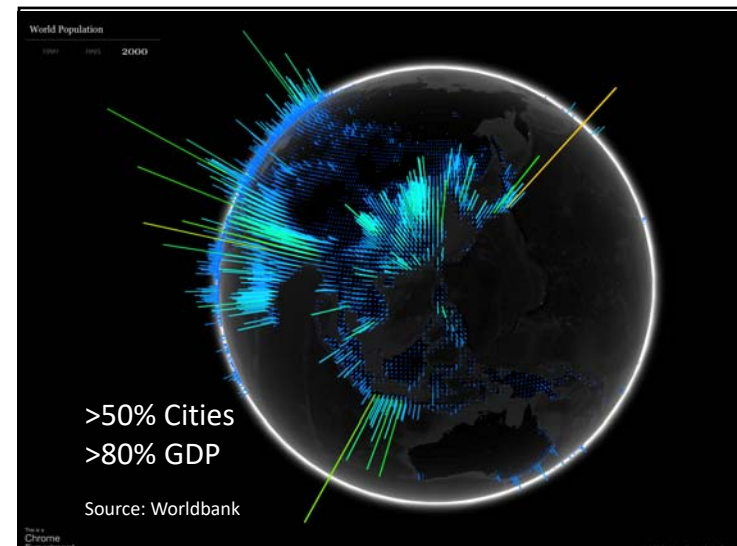
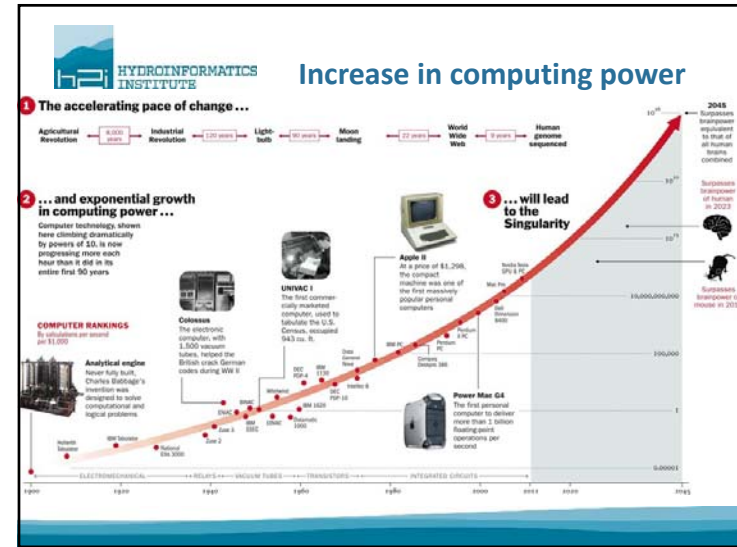
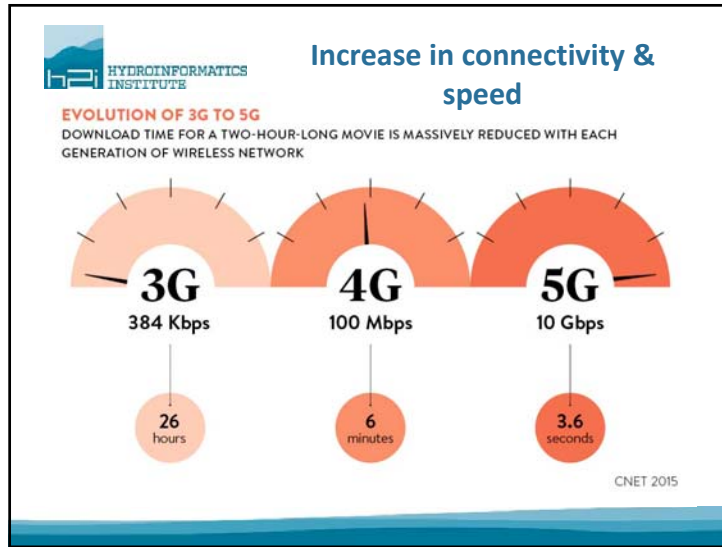
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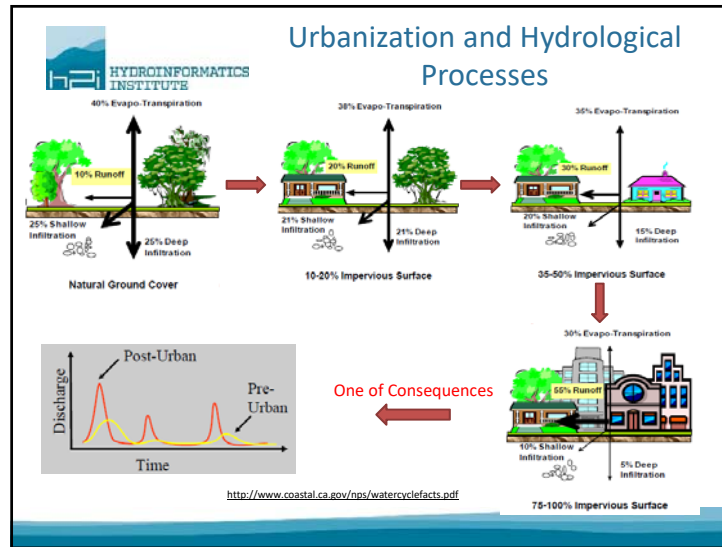
น้ำขึ้นให้รีบตัก (NAM KEUN HAI REEP TAK)

CAPTURE OPPORTUNITY OF BIG DATA AND ADVANCED ANALYTICS FOR  
SMART OPERATIONAL URBAN WATER MANAGEMENT SYSTEMS

JAIR SMITS – JAIR@H2I.SG



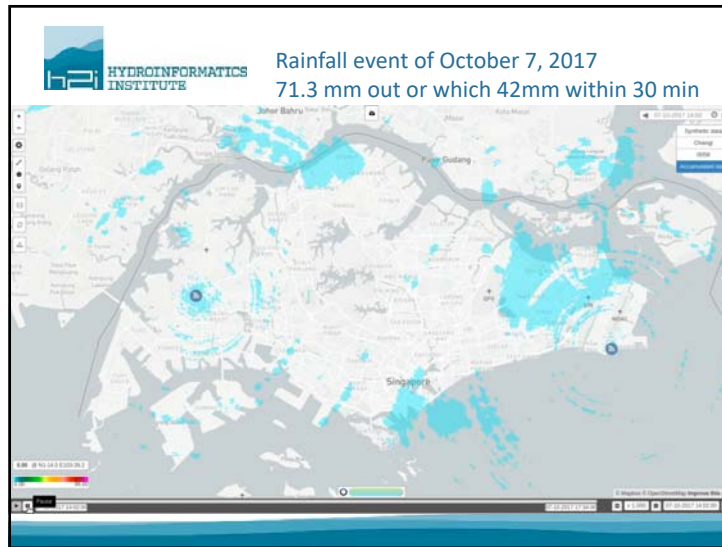




### How should we sense rainfall in Urban Environments?

**Traditional:**

- Collect data far from the urban environment
- Observe undisturbed hydrological processes
- No human interference
- Do not measure near buildings!



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### Acoustic Disdrometers

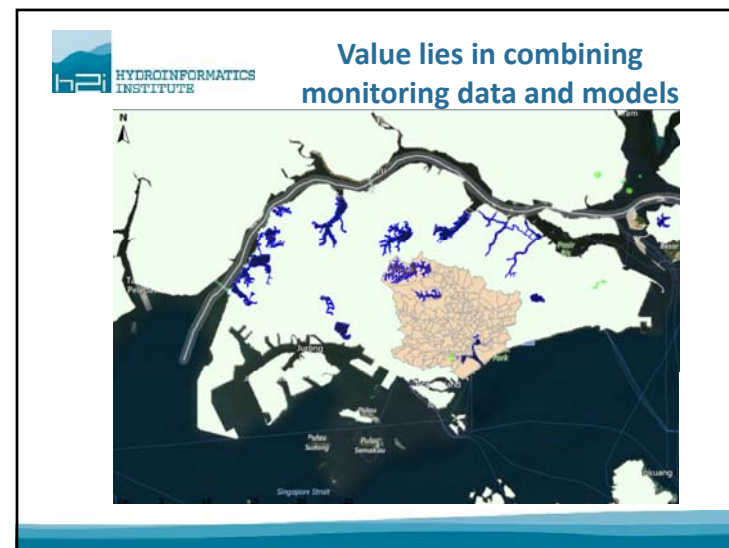
- No moving parts
- Low maintenance
- Accurate for heavy rain
- Drop size information
- **Cost: more than 50 times less than standard equipment**

Image courtesy of Prof. Dr. Ir. Nick van de Giesen

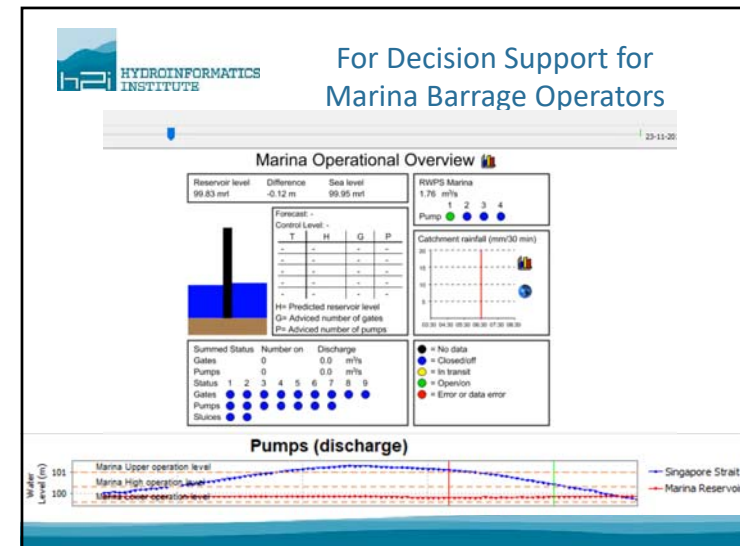
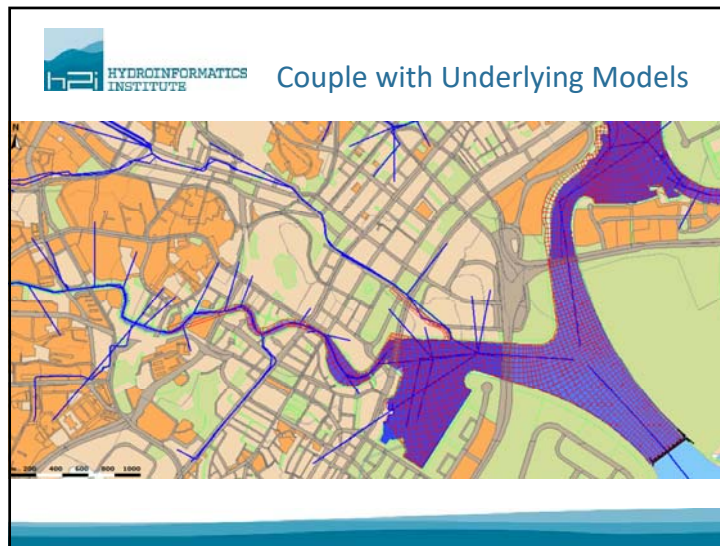
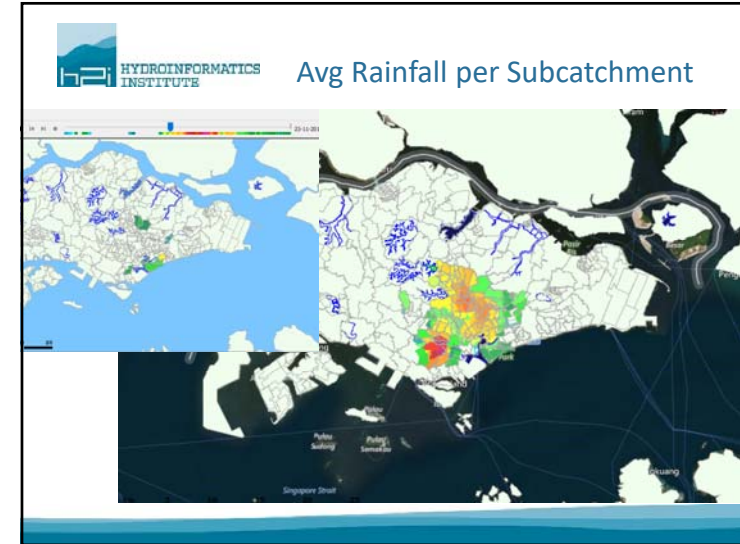
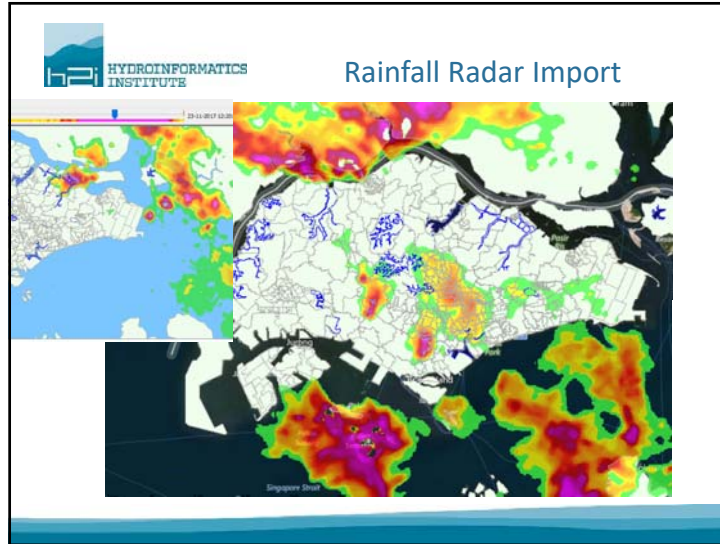
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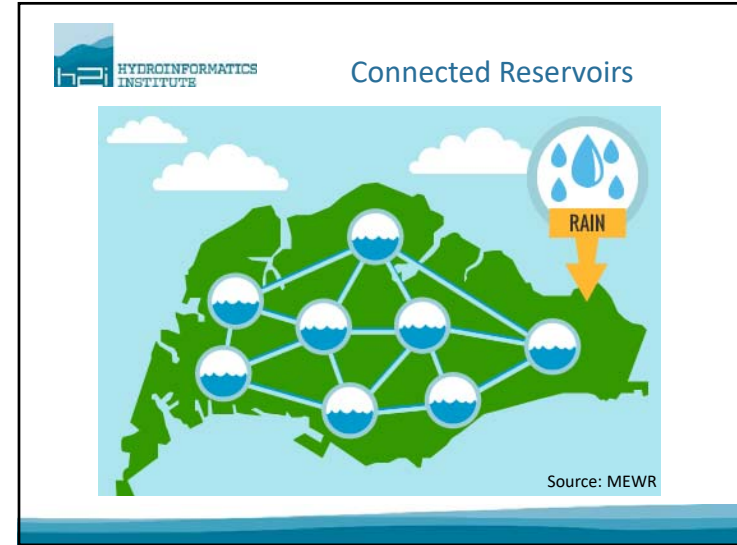
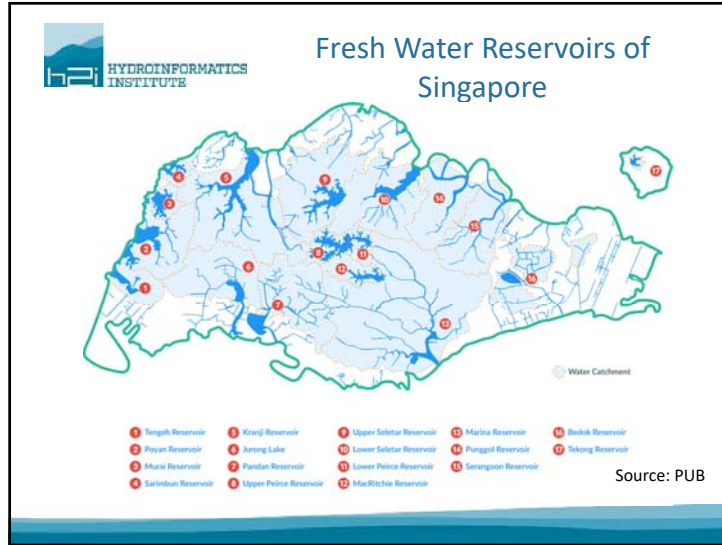
### IR2 Rainfall

Capture, share and be aware









**น้ำขึ้นให้รีบตัก (NAM KEUN HAI REEP TAK)**

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