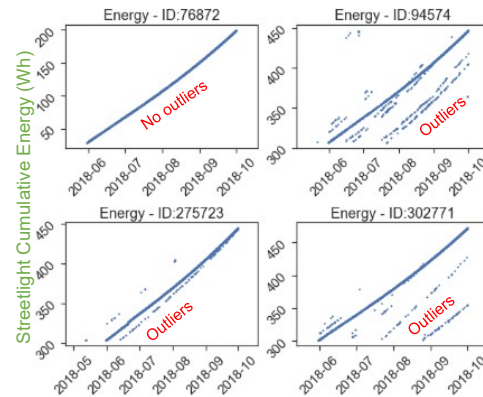
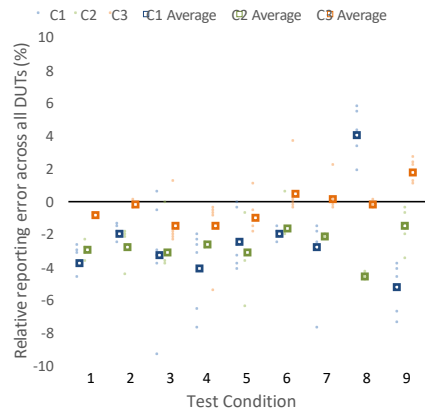


How can the energy-saving potential of Connected Lighting Systems be realized?

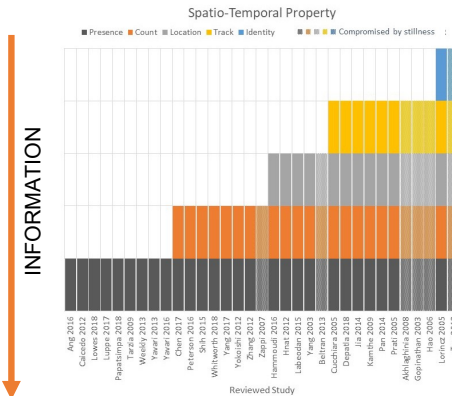
Building Integration
Challenges
Tuesday, 1-2:30 pm

By accurately measuring, collecting, and reporting energy data via interoperable and cybersecure methods?

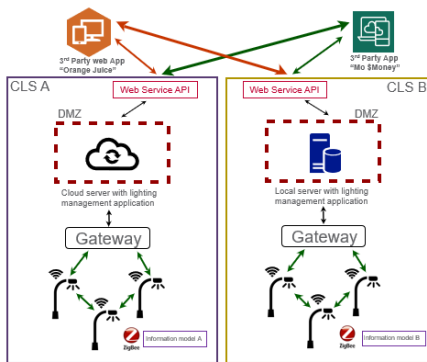


By sharing high-value occupancy data from integral sensors via interoperable and cybersecure methods?

Description	Property
"Is at least one person present?"	presence TRUE
"How many people are present?"	count 3
"Where is each person?"	location [Location]
"Where was this person before?"	track [Track]
"Who is this person? Is this person John?"	identity [Identity]

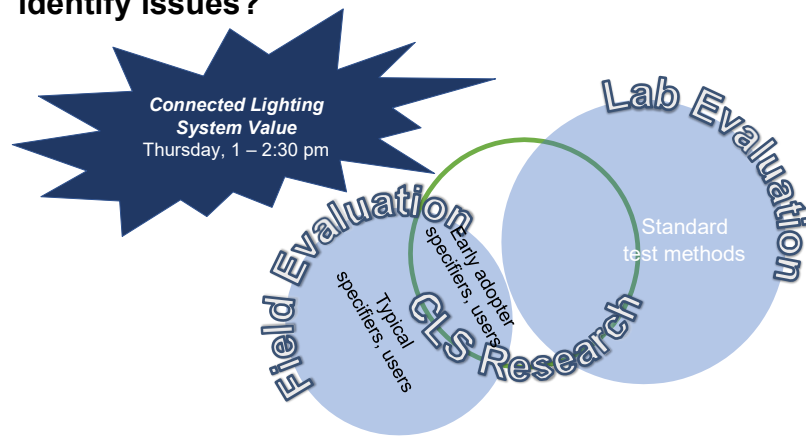


By facilitating high-value data-driven use cases enabled by interoperability, and not compromised by cybersecurity vulnerabilities?



	CLS A	CLS B	CLS C	CLS D
Encrypted Credentials	X			
Non-Default Credentials	X			
Uses Lockout Mechanism	X		X	X
No Schema Bypass	X			
Secure Cookie Retention				
Session Timeout	X	X	X	X
Session Cookie Destruction	X		X	X
No Renewed SSH Sessions	X		X	X
No Username Enumeration	X			
Default ZigBee Key Not Used			X	X
Secure Change of Credentials	X			
SAML Authentication	X	X		

How can well-informed technical evaluations in the lab and the field characterize performance variation and identify issues?



U.S. DEPARTMENT OF
ENERGY **BATTELLE**

PNNL is operated by Battelle for the U.S. Department of Energy

For additional information, contact:

Michael Poplawski | (509) 417-7561 | michael.poplawski@pnnl.gov

Researchers: Michael Poplawski (PI)

Travis Ashley, Yujiao Chen, Jessica Collier, Ben Feagin Jr, Paul Francik, Jaime Kolln, Hung Ngo, Shat Pratoomratana, Jason Tuege, Alex Vlachokostas, Anay Waghaie

2/5/20 | PNNL-SA-150612

Pacific Northwest
NATIONAL LABORATORY
www.pnnl.gov