



I3 Consortium

To sign up for meeting notices associated with this workgroup:

send an email to video-join@i3-iot.org

(The general I3 Consortium mail group is i3-join@i3-iot.org)

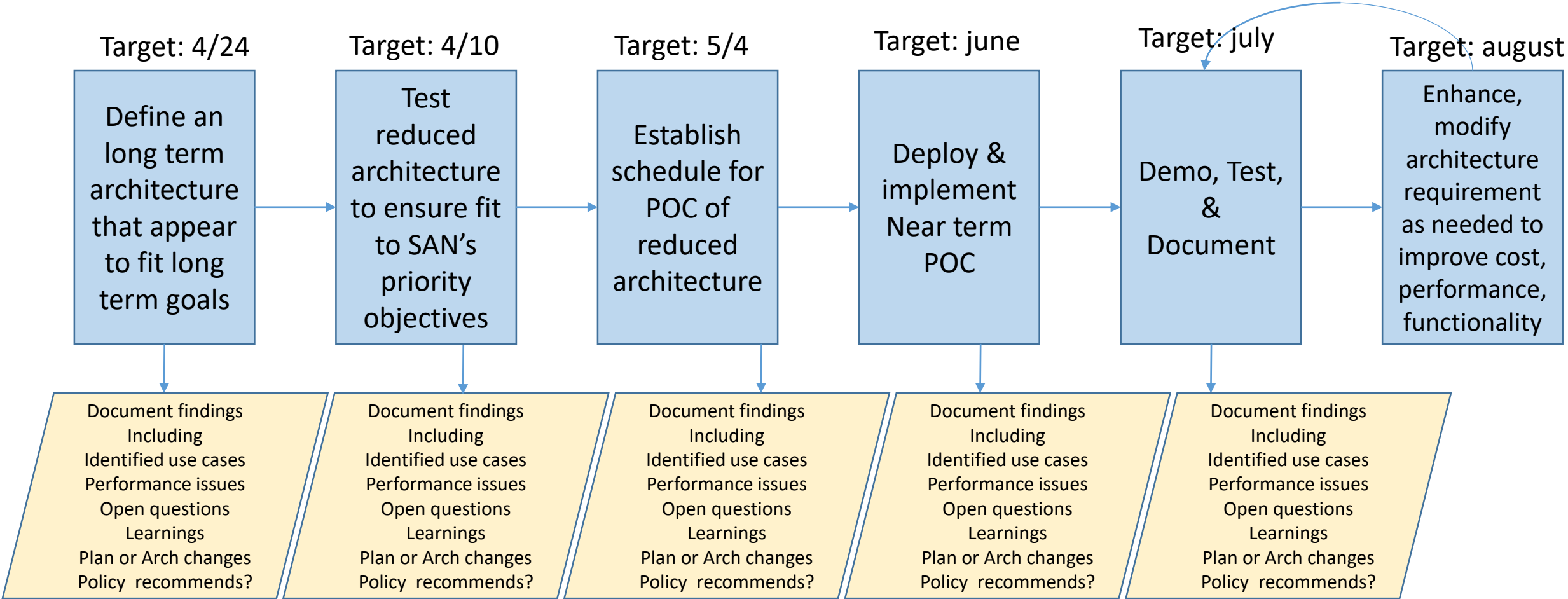
To become an I3 member and support our efforts to create a fund to support university research

<https://www.eventbrite.com/e/join-the-i3-consortium-tickets-129358072477>

It is only \$25/year but these contributions make a big difference.



Proposed Process



13 Consortium Sanitation Working Group (video challenge)

Workgroup highest priority task: Demonstrate the ability to collect video from multiple cameras in real time so that it can be stored/streamed to multiple video analytic systems.

Big Picture Requirements

- Sanitation pick records (date, time, location) per bin
- Crew Access to video from in cab tablet/phone
- Crew access to City 311 requests
- Crew tagging of missed collections, down vehicles
- Access to truck(s) routing over ESRI map
- Map with location of sanitation assets
- Collection of accident information
- Collection of safety violations (traffic lights, signs, speed, etc)
- Real time location tracking
 - Position in route
 - Actual/forecast route completion time (integrates weather, traffic, etc into prediction analytics)
 - Mileage, time spent on site
- Operational statistics (comms, equipment outages,

Longer Term Wants/Needs

- City Service Alerts based on image analytics
 - Integration with City 311
- Pot Hole evaluation and prediction
- Automatic identification of abandon furniture, abandon vehicles, debris piles, graffiti
- Vehicle maintenance planning based on road condition, run time, weather, ..)
- Great Street Ratings

Show the ability for video analytics detected events to provide the data necessary to support the following functions.

* The 'ability' to integrate with existing city systems that provide these functions is important. Demonstrating integration or functional equivalence is secondary.

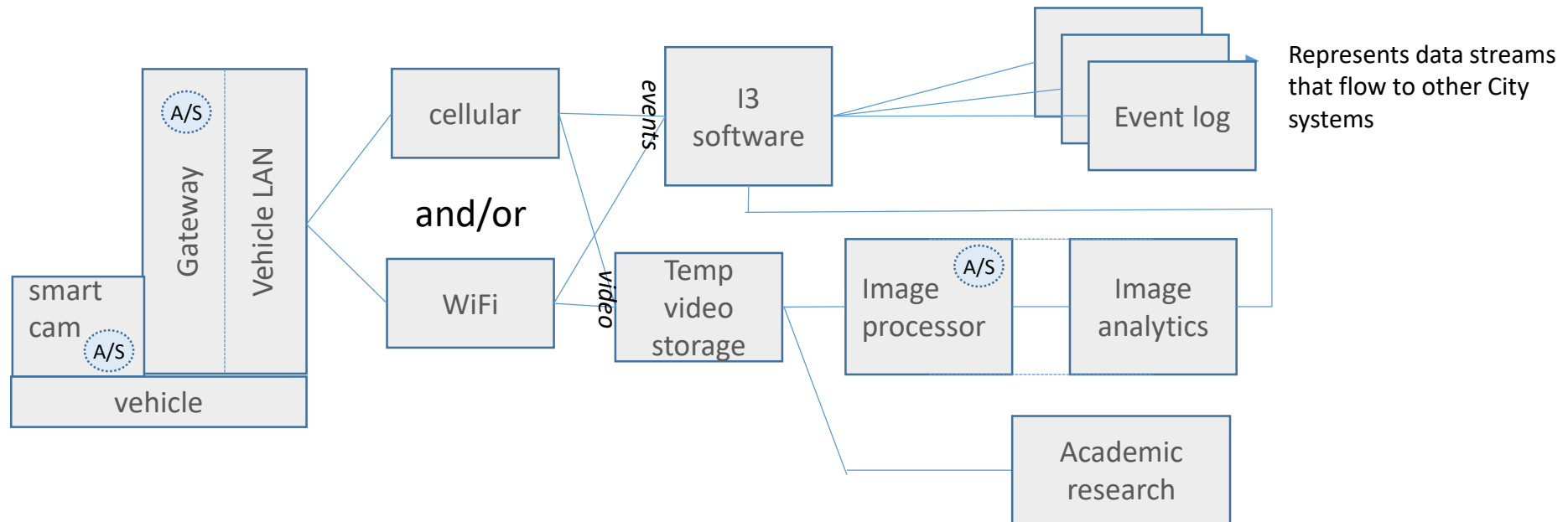
L.A. Sanitation: The Evolution Looks Like This



I3 Consortium Sanitation Video Working Group

Priority Focus

Phase 1 will focus on showing the ability of smart cameras to detect alerts that compliment the video.
Phase 1 will also show centralized image analytics to detect alerts not embedded in the camera logic
Phase 1 will also show the ability to use video to research new analytics approaches



Notes:

- Assumes each vehicle forms a local LAN where other devices can plug into. Devices may be identified devices or something that has not been invented yet.
- If more than one comm option, the LAN picks the best option for transmission
- I3 logs records, permissions, connectivity, and routing and policies change over time.
- Image processing is shown as a separate block where video is altered to meet policy needs (e.g. facial blurring). Could be integrated in to image analytics but shown separately to reflect policy importance
- Temp storage holds video for *possible* long term storage. E.g. holds video for 24 hours; if an incident is detected, video can be moved to a long term incident file. Temp storage erased after XX hours.
- Image analytics converts images into event notices. Some events are city internal alerts some can be released as public open data. Departments choose an analytics engine that best fits their needs.
- Action processing are systems that respond to detected conditions.
- Academic research are feeds to external research centers. This is non-public data and special T&Cs must be agreed to before this data can be released.
- Each function in the architecture should be clear as to who owns/operates the computing platform, who owns/controls the data inside the platform, and who provides input/output data streams.

Next Steps

1. Ratify or Edit proposed architecture illustration
 - Update and distribute slides by 4/10
 - Consensus reached by 4/17?
2. Map workgroup participants into architectural components (4/24)
 - participant may map to one or more components
 - Establish schedule for installation/integration
3. Phase 1 POC participants for installation in June
4. Documentation/demonstrations/testing in July
5. August/September. First set of feature enhancements added

Participants can choose to be included in phase 1 or held for a feature enhancement round in the fall.

Other Actions from 4/6 meeting

1. Ron to prioritize sanitation department needs (Done- integrated into these slides)
2. Joyce to share existing data security/privacy guidelines.
3. Ron/Joyce to inform lawyers about the project.