PSIP Challenge Question

Premise
- A number of commercial delivery fleets that have high coverage, high frequency routes across NYC streets are outfitted with roof-mounted CARMERA sensors.

- These sensors yield high spatial and temporal resolution imagery of New York City streetscapes through forward and side-facing smartphone cameras – 90%+ of active, public streets are photographed on a weekly or more frequent basis (vs. Google Street View, which is usually updated yearly or less frequently).

- This imagery, and other inertial and metadata, are transmitted to CARMERA’s cloud platform on a nightly basis.

Goals
- CARMERA data customers want to be able to detect significant changes in road conditions (construction, potholes, etc.), layouts (bike lanes, medians, etc.) and signage (speed limits, business names, gas prices, etc.) in a more timely fashion.

- CARMERA wants to provide customers an easily consumable API to share these current road conditions, observations, and updates with the best accuracy and speed possible.

Task
Describe the three biggest challenges in attaining the goals above (assuming that the challenges in the “Premise” have already been solved).

Pick one, and be as specific as possible about tools, implementation and tradeoffs to solve the problem.

Make assumptions if you have to and make sure to mention them. Be mindful of resource and time constraints that typical startups have.