We make cities responsive.

Numina delivers real-time activity data to

plan more equitable & efficient streets,

trigger on-demand services, and

A/B test the built environment.
What you see...
What Numina sees…

12+ pedestrians
1 bicyclist
1 wheelchair
1 delivery truck
#5L Fulton Ltd bus
#71 Haight / Noriega bus
2 utility vehicles
2 green lights
What Numina sees...

12+ pedestrians  
4+ at bus stop  
1 at SE corner

1 bicyclist  in bike lane

1 wheelchair

1 delivery truck  parked

#5L Fulton Ltd bus  southbound

#71 Haight / Noriega bus  southbound at stop

2 utility vehicles  parked

2 green lights
What Numina sees...

- **12+ pedestrians**
  - 4+ at bus stop
  - 1 at SE corner
- **1 bicyclist** in bike lane 12mph
- **1 wheelchair**
- **1 delivery truck** parked
- **#5L Fulton Ltd bus** southbound
- **#71 Haight / Noriega bus** southbound at stop
- **2 utility vehicles** parked
- **2 green lights**
NUMINA’S UNIQUE FEATURES

Pop up anywhere

Process data on-board

Measure *anything you can see*
Deadly stretch of New Kings Road coined ‘Danger Zone’ after 4 pedestrian deaths in 1 week

Lt. J. Paris of the Jacksonville Sheriff’s Office holds an off-site roll call in a parking lot along New Kings Road last week with
In Jacksonville!
Timeline

- Early 2016: COJ + HPC apply for RWJF program
- May 2016: Technology for Healthy Communities app due
- Late June 2016: Numina Selection (3 companies of 216 apps)
- Oct. 31 - Nov. 4, 2016: Sensor installation
- January 2017: First data delivery
- April 2017: First assessment & publication

EXPANSION PLANNING
KEY INGREDIENTS

Planning

*identify need*

Implementation

*execute!*

Funding

*allocate resources*
Urban Innovation checklist

- Clearly defined problem; buy-in for chosen solution
- Invested stakeholder organizations
  - Internal champions and project owners
- Interdepartmental collaboration
  - Good communication tools & protocols
- KPIs and definition for project “success”
- Plan for long-term expansion or sustainability
- Patience, Passion, Persistence
THANK YOU

CONTACT

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JAX project objectives

1. **Baseline bike/ped data**
   to prioritize intersection safety based on usage
   - The City does not have basic info on street usage.
   - Numina data will help them identify highest-impact sites for redesign.

2. **A/B test redesigns**
   using tactical urbanism approaches to infrastructure
   - Compare interventions using a tactical urbanism approach.
   - Deploy “pop-up” infrastructure to vet investment opportunities.

3. **Assess permanent interventions**
   for long-term awareness of impact and responsiveness
   - Report whether or not chosen infrastructure has intended effect.
   - Empower the City to iterate on improvements on an ongoing basis.
Welcome to The Longterm Observation of Scenes with Tracks Dataset

The LOST Dataset comprises videos taken from streaming outdoor webcams, capturing the same half hour each day. Data collection started in June of 2010 and continues to this day. LOST contains rich metadata, including geolocation, object detections, and tracking results.

To date, we have captured 16,009 videos, for a total of 155,029,134 frames and 727 Gb of compressed video data. Watching it all would take over 258 days, 2 hours, and 24 minutes. Processing this data has given us 434,046,047 object detections and 1,243,475 tracks.

More at: http://lost.cse.wustl.edu/
Who we are

Tara Pham
CEO
urban design
public health + urban planning
Next City Vanguard

Martin McGreal
CTO
machine learning
machine learning, DevOps, + security
18 years in Fortune 100 innovation offices

Our founders
+
have worked together since 2014, after both were hit by vehicles while riding their bikes
+
won a $50k hackathon
+
bootstrapped the development of a computer-vision sensor deployed in major cities!

Team

Paul de Konkoly Thege
Operations
previously Boeing Ventures, Venture for America

Zach Teed
Computer Vision
previously Sandia National Labs

Dean Di Pietro
Hardware
previously OXO, 23 yrs. in product design
Who’s with us

**Advisors**

- Robert Pless, PhD  
  George Washington University  
  Chair of Computer Science,  
  Computer vision expert

- Frank Vallese, PhD  
  ePhysics Technologies  
  CEO for 25 years,  
  EE & sensor expert

**Investors**

- U R B A N - X
- MINI
- SOSV

**Funders**

- Knight Foundation
- Robert Wood Johnson Foundation
- Health 2.0

*non-dilutive