

DATA SHEET

# Urban Analytics Framework

**EMPOWER URBAN PLANNERS AND INFRASTRUCTURE OWNERS TO DESIGN SAFER, SMARTER, GREENER AND MORE EFFICIENT CITIES WITH LOCATION INTELLIGENCE FOR TRANSPORTATION INFRASTRUCTURE.**



## OVERVIEW

### Summary

The Urban Analytics Framework (UAF) provides an analytical evaluation of the quality of urban space for both vehicles and pedestrian enabling the design of efficient, economical, driver and pedestrian friendly infrastructure, operational assessment for current and future year traffic conditions, detailed reporting of key MOE's and high definition presentations to non-technical stake holders.

### Benefits

- Model traffic operation and pedestrian crossing opportunities
- Improve operation of public transport terminals
- Review safety issues at concerts, sporting and special events.
- Design urban area evacuation plans
- Report industry standard MOE's and LOS
- Compare current and future year scenarios to determine the effect of proposed infrastructure changes.
- Communicate with non-technical audiences using high definition 3D

The Urban Analytics Framework (UAF) plays an essential part in any traffic engineer's, infrastructure owners and urban planner's modeling toolkit. Part of the Quadstone Paramics award winning suite of microscopic simulation tools the UAF provides a powerful, integrated platform for modeling a complete range of real world pedestrian centric urban design problems.

Used in over 80 countries world-wide by thousands of customers including commercial consultants, cutting edge transportation researchers and state-funded Government agencies, Paramics is the most consistently dependable simulation planning tool available today.

### Demonstrate the Need, Quantify the Benefits

UAF can be used to perform balanced urban space design where the needs and quality of service provided to both vehicular and pedestrian users are evaluated in tandem. UAF can determine if there is a need to provide new crossing facilities by evaluating delays to pedestrians, probability of conflict between vehicles and pedestrians and the queuing / packing pedestrians are subjected to while they wait to find a suitable opportunist crossing gap.

If the need for a dedicated crossing facility is shown UAF can also calculate how different types of crossing and different Walk / Don't Walk times affect traffic flows resulting in longer queues and more delays to drivers.

### Identify Causality

UAF can be used to evaluate different combinations of road layout and crossing provision to quantify the relative pedestrian safety performance of competing designs. Through analysing these complex interactions the UAF can answer the all-important question – why?



Paramics high definition 3D graphics

### Public Transport Terminals

Integrating pedestrians and vehicles in and around public transport terminals is an everyday task for traffic engineers and urban planners; UAF allows both these modes of transport to be evaluated in a single environment.

UAF can be used to examine transfer times between, or exit/entry delays to, public transport terminals. UAF can also be used to assess safety issues for curbside drop off points and dynamic signaling strategies allowing high volumes of pedestrians to be processed safely through the study during peak commuting hours.

## Urban Analytics Framework

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### Event Management & Urban Spaces

Integrating pedestrian and traffic components seamlessly in one environment lets users easily test alternative scenarios in event management and urban space design. For example, having a buffer period between pedestrian and vehicular traffic leaving the study area or temporarily allocating a section of road network to the pedestrian crowd allowing a faster and safer exit from the study area.

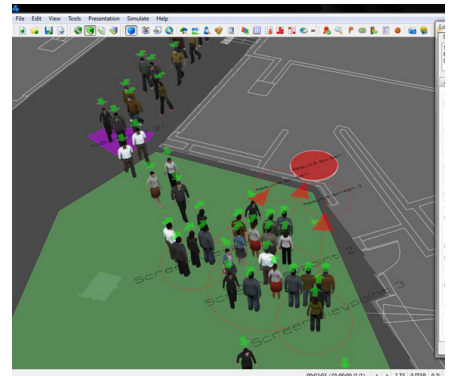
### Analyze, Understand, Report

The detailed agent and spatial analytics tools provided in UAF operate at run time so there is no need for time consuming post processing of data; in UAF all the key metrics you need are available whenever you need them.

Agent analytics allow us to color code agents based on Level of Service (LOS) style bandings; default LOS bandings based on Fruin's industry standard methodology are provided in all analytics tools in UAF.

Spatial analytics record the footsteps of each agent as they move through the free space recording the agent's "experience" and how the space dictates their quality of service. Spatial analytics can be used to create colored maps of complex spatial data including agent speed, density, delay, and space utilization each of which can be used to examine causality for collisions and Level of Service for pedestrian movement.

Region analytics allow the user to define data collection regions of any shape and record the flow/count in and out of that region aggregated by a user definable time period while Connector analytics allows us to query key agent metrics such as speed, travel time, flow/count and delay sampled between way-



*Complex queuing behaviour in public transport terminals*

points as each agent makes their way through the model.

As with all UAF analytics tools comprehensive graphics and reporting options are provided to maximize the value and add clarity. Class leading analysis tools and 3D presentation make it easy to get started, get results and convey your findings quickly. Backed by the best customer support in the industry including industry professionals who man our international helpdesk, UAF is the urban designer's tool of choice.



*Simulated people moving through infrastructure*

FOR MORE INFORMATION ON QUADSTONE  
PARAMICS, UAF AND PRODUCT DEMOS VISIT OUR  
WEBSITE AT [WWW.PEDESTRIAN-SIMULATION.COM](http://WWW.PEDESTRIAN-SIMULATION.COM)

### SPECIFICATIONS

Supported Operating Systems: Windows XP 32bit / 64bit, Windows Vista 32bit / 64bit, Windows 7 32bit / 64bit

Every connection is a new opportunity™