The Measurement of Everything

How satellites, sensors and the Internet of Things are changing the way we do…. Everything

Dr. Lars Dyrud

CEO, OmniEarth Inc.

Confidential – For Discussion & General Information Purposes Only

© OmniEarth, Inc. 2014

The Problem

More perfect information = more perfect decisions and planning

People do not know what the $&@! is going on

Worse yet… they don't always tell you…

© OmniEarth, Inc. 2014

It's 1990 for the Internet-of-Things, Measurement-of-Everything will *change* the processes in which all businesses operate and make decisions … creating trillions of dollars of efficiencies.

Not all data bits are created equal. OmniEarth is creating the most *valuable global data sets* and using those data sets to deliver *enterprise insights*.

About OmniEarth

© OmniEarth, Inc. 2014

The *New Normal*

More perfect information = more perfect decisions and planning

Measure everything that relates to your business, your priority, and your country

Gather all the data

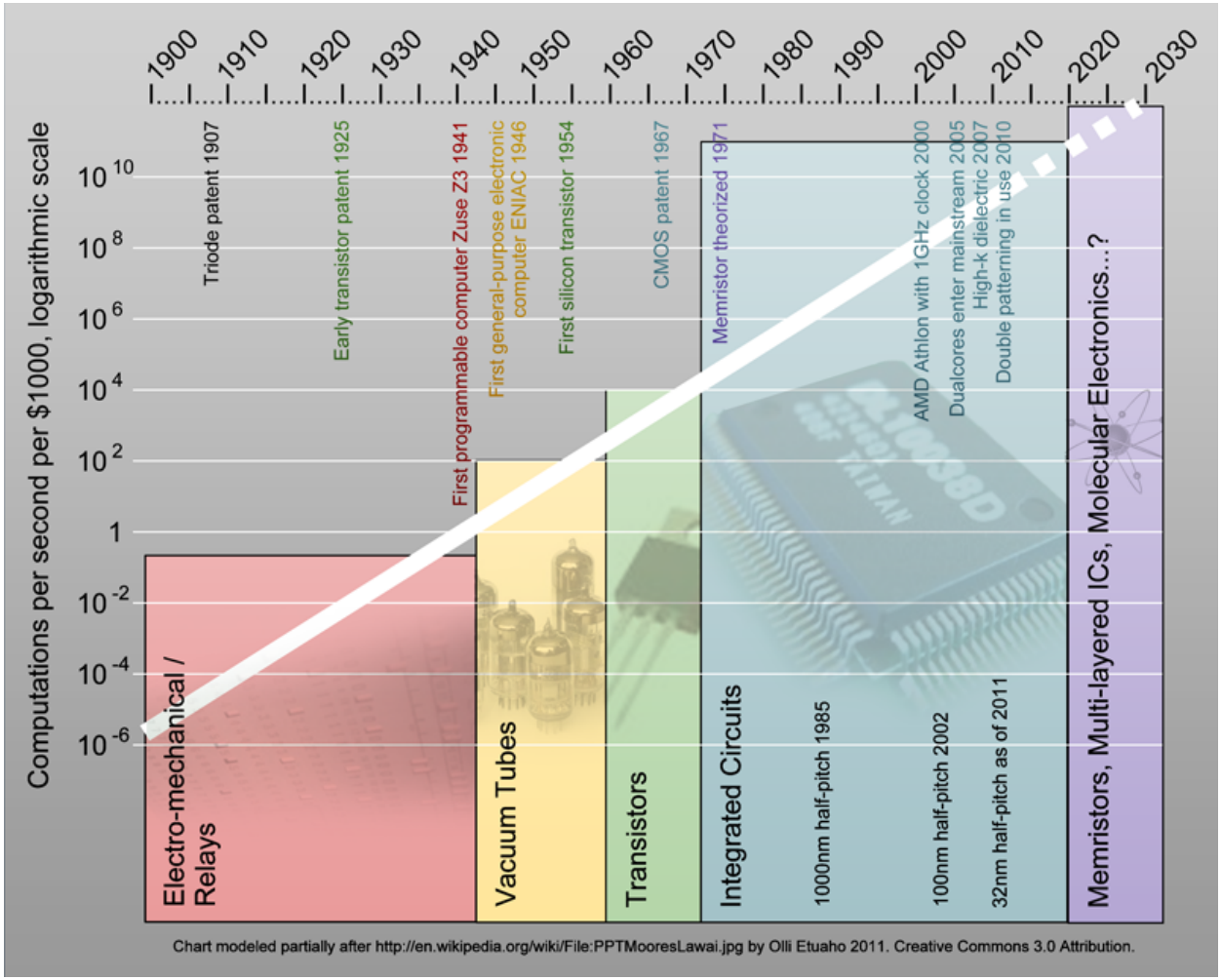
Then analyze it

Then make it insightful!

© OmniEarth, Inc. 2014

What good is all the data?

If you can't afford to analyze it?



© OmniEarth, Inc. 2014

$Trillions of efficiencies to be gained

Industrial Internet Requires Consistent Accurate Information

Jeff Immelt

Chairman & CEO, GE

"GE is at the forefront of the discussion about the potential of the industrial internet revolution, which will add about $15 trillion to global GDP by 2030, the equivalent of adding another US economy to the world."

"The internet of everything will have five to ten times the impact on society as the internet itself … and will create $19 trillion in economic benefit and value over the next decade"

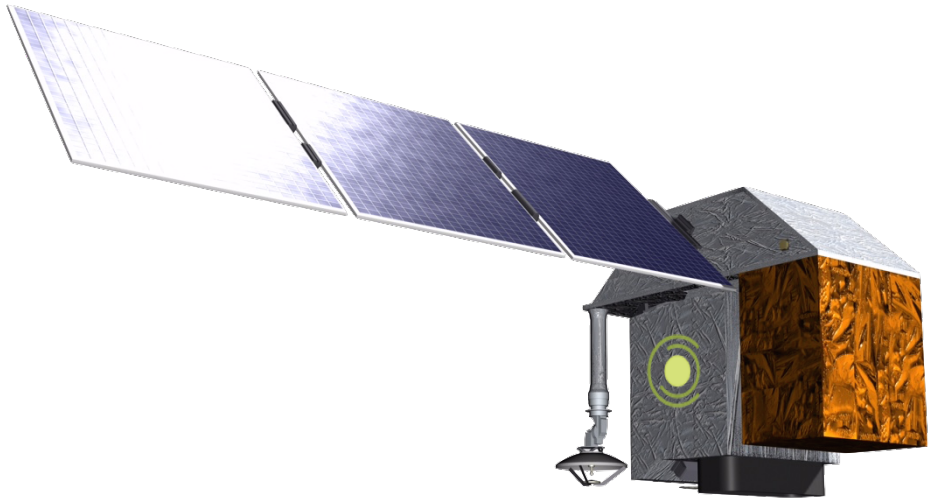
John Chambers

Cisco CEO

© OmniEarth, Inc. 2014

Data Everywhere, Every Day

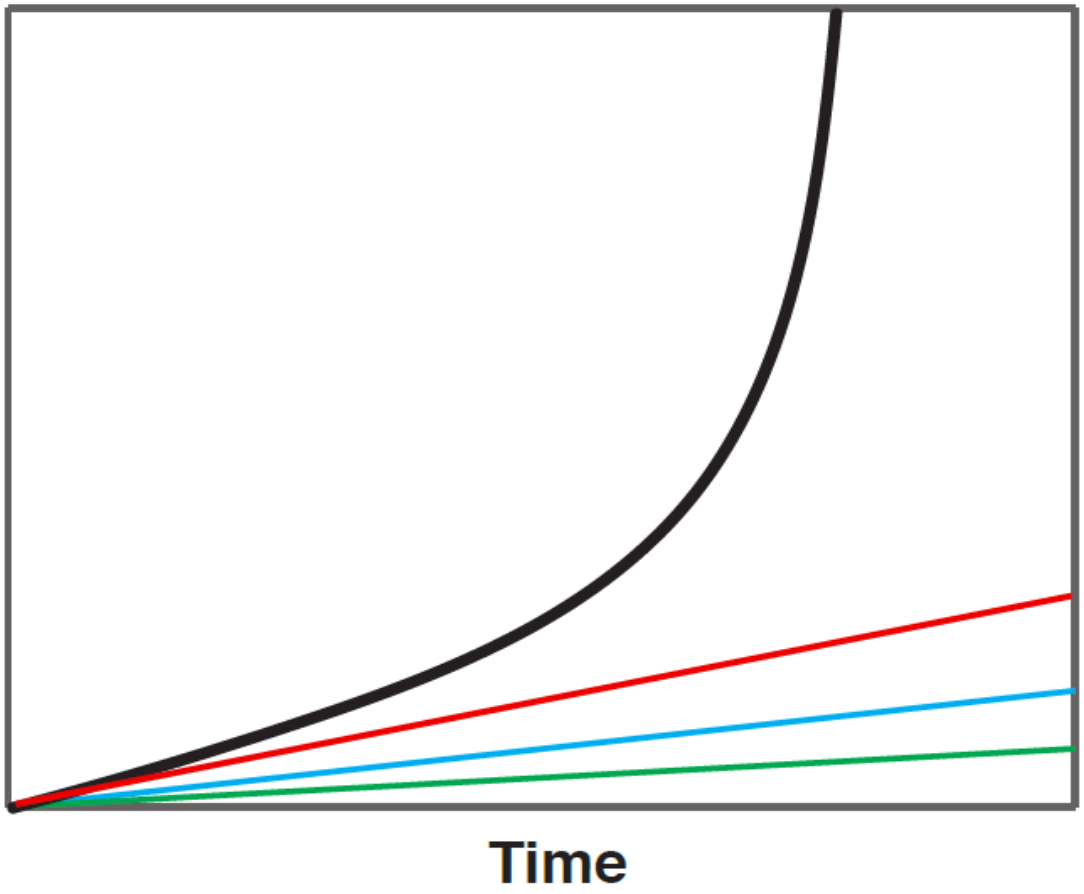
Low-Cost, High-Value Sensor Network for the Internet of Things



OmniEarth **solves the problem** of difficult-to-obtain data and insights. Delivering the before picture before you knew you needed one. Our system makes 2x2m observations of the globe for 10 years – the equivalent of deploying **1.275×10^{12}** sensors costing only **0.0003** cents each.

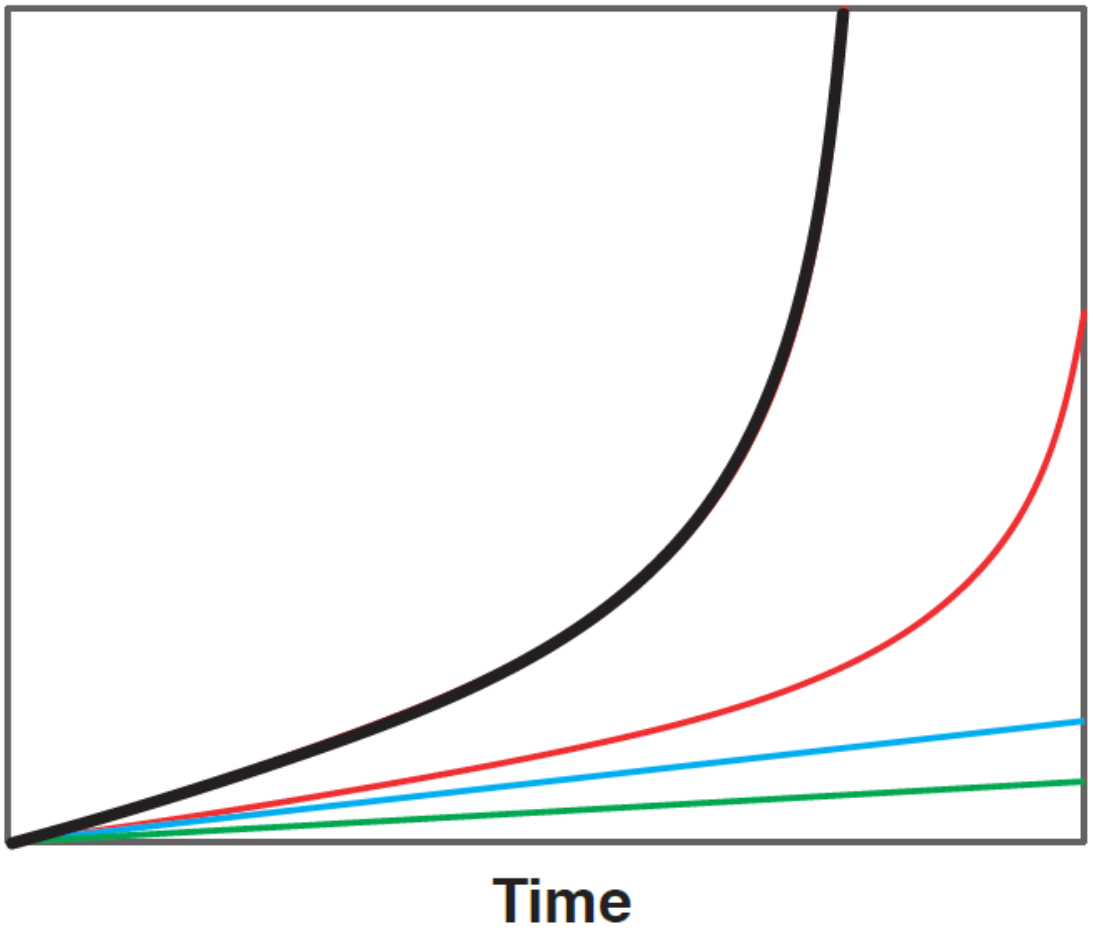
© OmniEarth, Inc. 2014

The drivers for scaled technology development in the measurement of everything



© OmniEarth, Inc. 2014

The drivers for scaled technology development in the measurement of everything



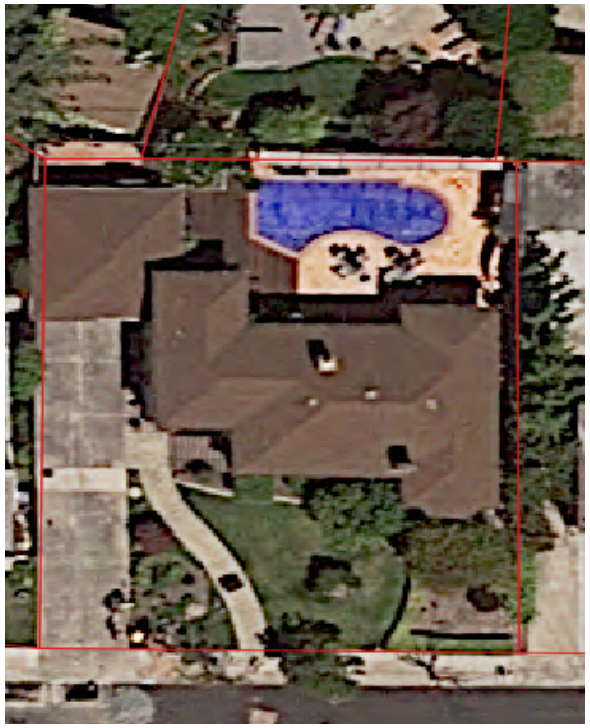
© OmniEarth, Inc. 2014

Water Efficiency

Maximizing electrical efficiency doesn't mean asking people to sit in the dark.

© OmniEarth, Inc. 2014

How Much Water Does California Need?



OmniEarth's patent pending methodology identifies irrigated versus non-irrigated features. This precision analysis produces an exact water budget for every parcel.

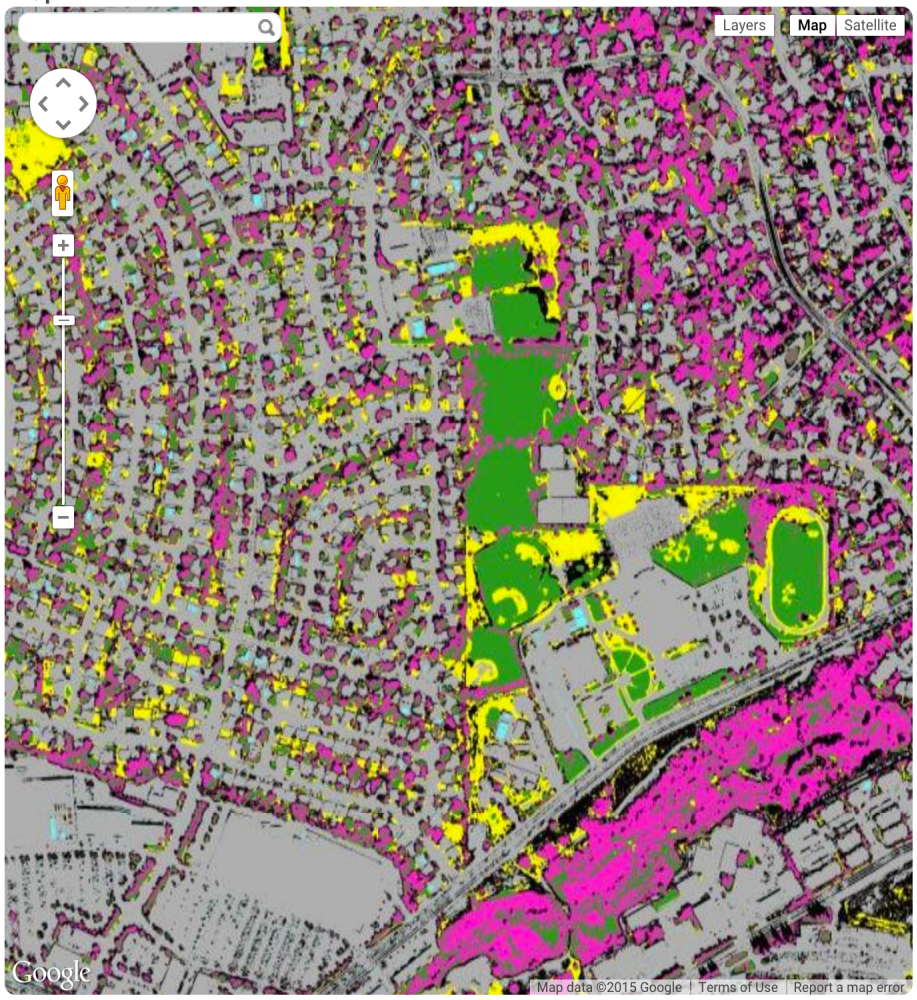
© OmniEarth, Inc. 2015

OmniEarth in Action

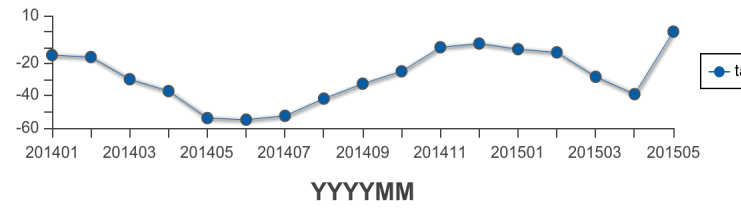
Ongoing analyses run automatically, and deliver results via secure, cloud-based dashboards

SFR Water Usage by Parcel

Map



Delta by Parcel (SFR)



Page 1 of 1 — Displaying 1 - 17 of 17

Parcels - SFR High Consum...

ID#	ADDRESS	Total_Delt
070010200400...	909 FIGUERO...	-140.3
071020004000...	101 JAMIE LN ...	-354.1
213062001600...	125 DEERWO...	-549.2
213062001700...	115 DEERWO...	-268.2
213062001800...	105 DEERWO...	-343.7
213062001900...	122 COBBLEO...	-379.9
213062002000...	124 COBBLEO...	-163.3

Page 1 of 354 — Displaying

Water Budget by Parcel (SF...

Month	Year	Value (CCF)
May	2015	55.3
April	2015	46.7
March	2015	36.2
February	2015	20
January	2015	15.4
December	2014	13
November	2014	18

Page 1 of 1 — Displaying 1

Delta by Parcel (SFR)

Month	Year	Value (CCF)
January	2014	-14.6
February	2014	-15.8
March	2014	-29.6
April	2014	-37
May	2014	-53.8
June	2014	-54.8
July	2014	-52.4

Page 1 of 1 — Displaying 1

Water Meter Actuals by Par...

Month	Year	Value (CCF)
May	2015	0
April	2015	7.8
March	2015	8.1
February	2015	7.1
January	2015	4.4
December	2014	5.5
November	2014	8.2

Page 1 of 1 — Displaying 1

© OmniEarth, Inc. 2014

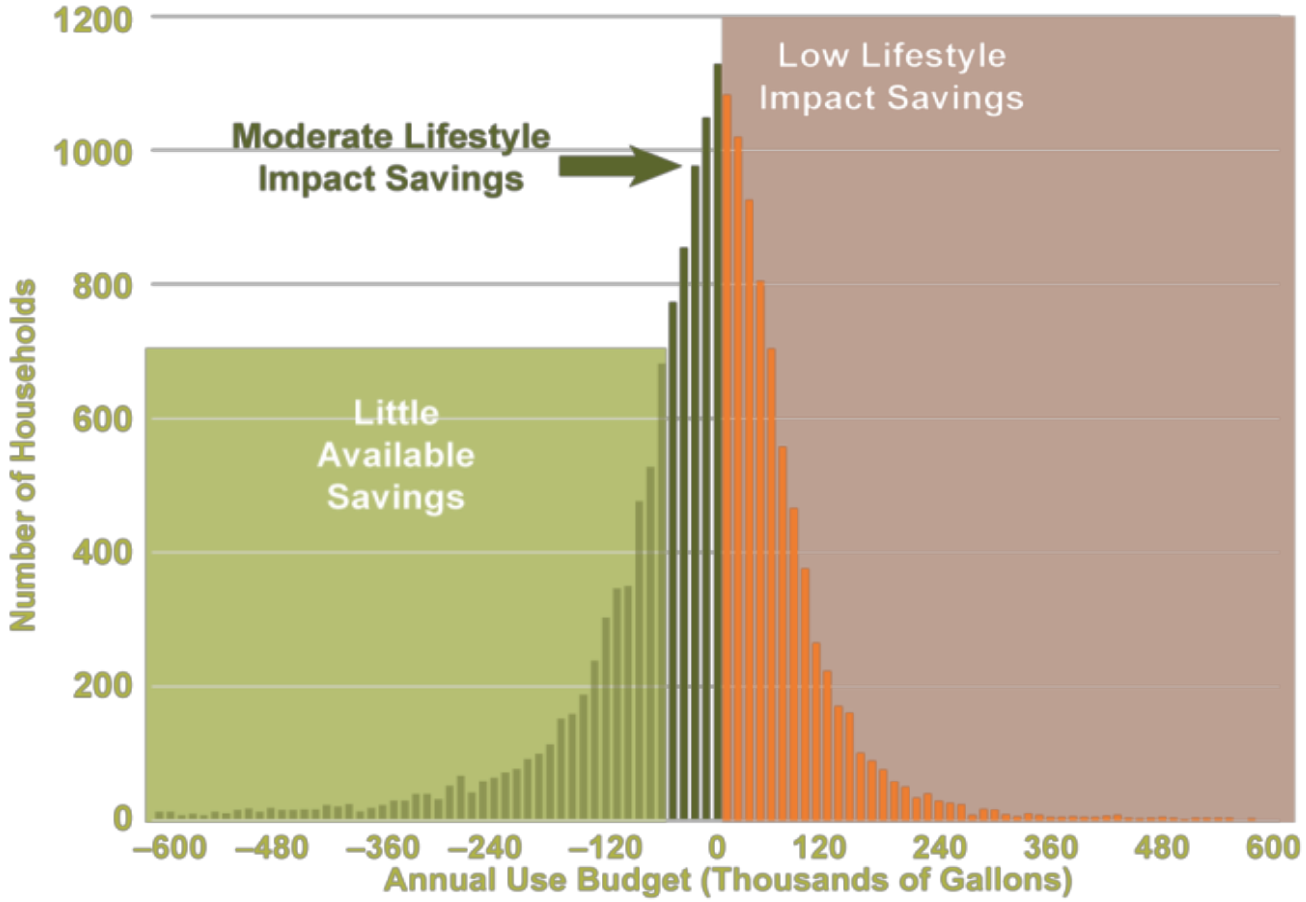
Efficiency Metrics Are the Answer.

Establish potential water savings

Determine degree of difficulty for achieving savings

Maximize cost effectiveness of conservation programs

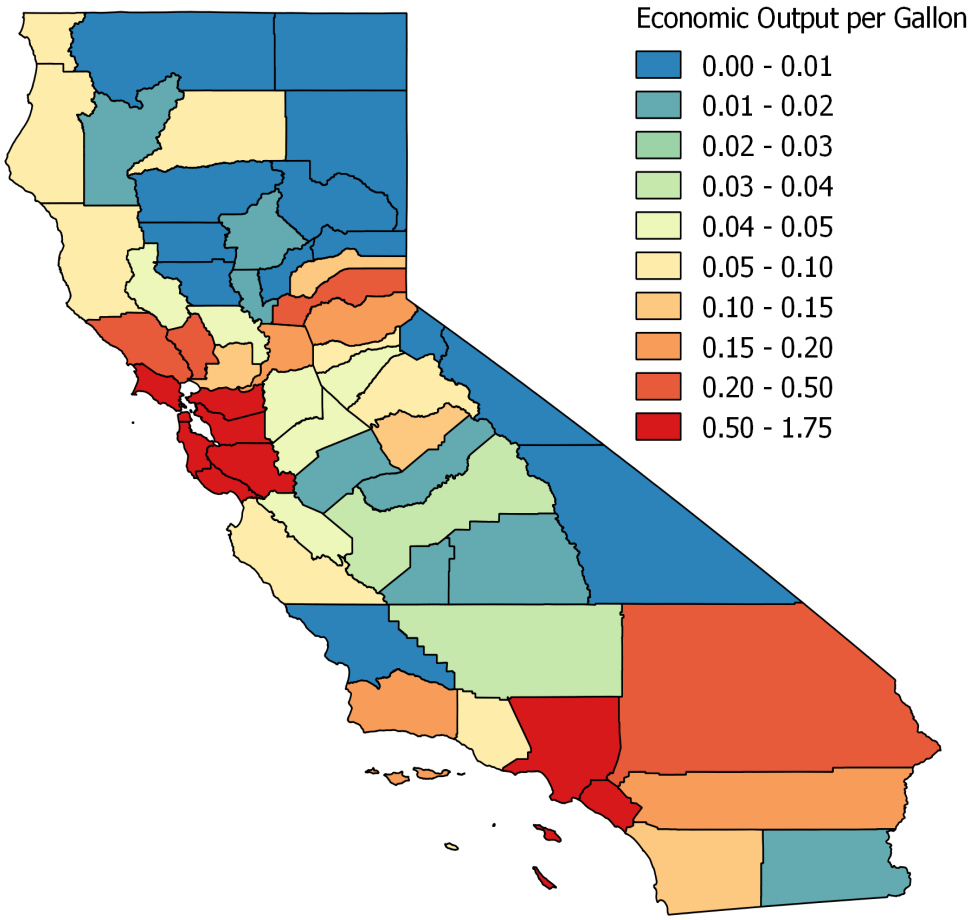
Leverage analytics for real time decision making



© OmniEarth, Inc. 2014

Statewide Water Analytics

- Monitor the impact of drought, consumption, and policy
- Create outcome oriented data models



© OmniEarth, Inc. 2014