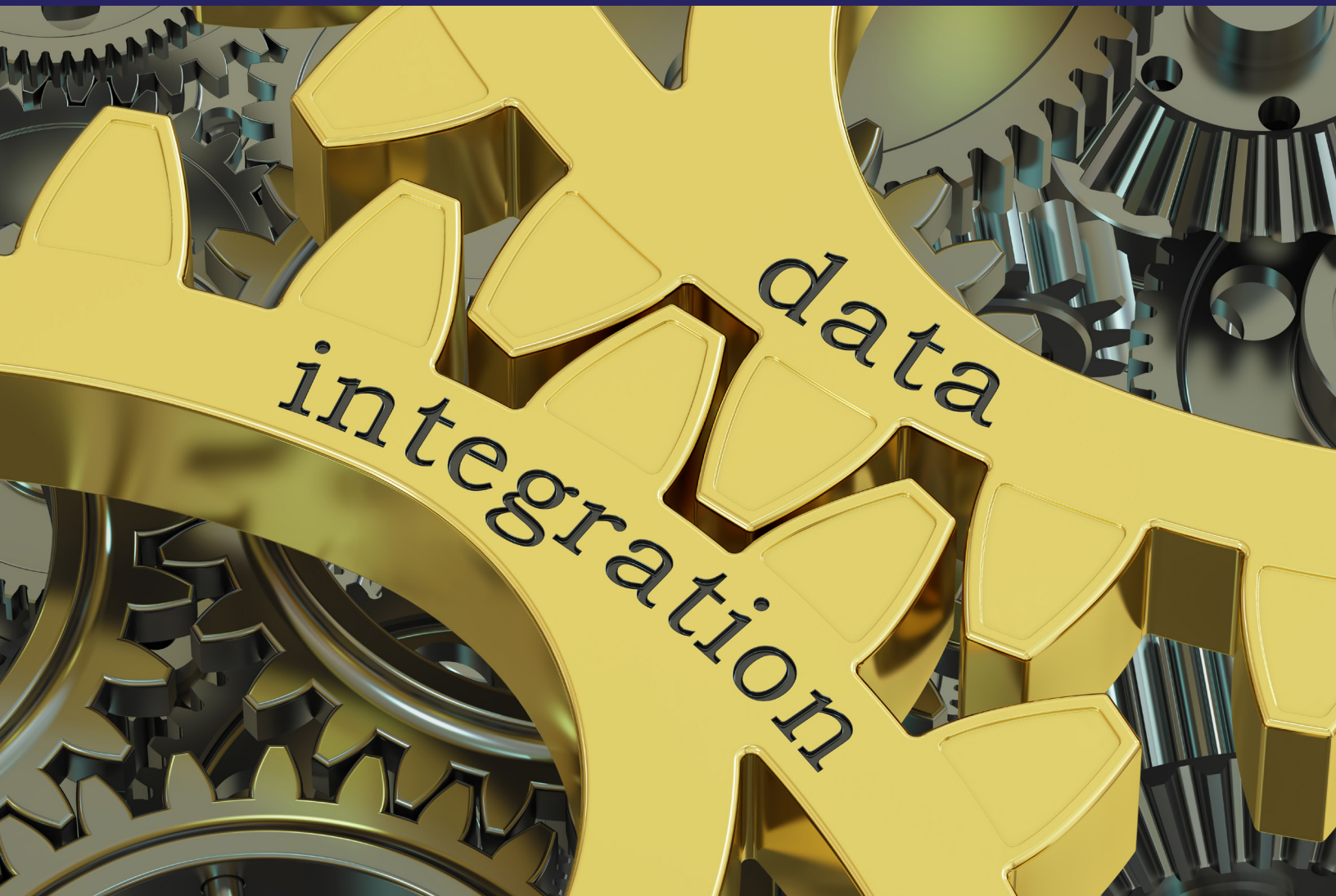




PACIFIC DATA  
INTEGRATORS

## Our Products

Delivering Business Outcomes Using Industry Best Practices



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# Mapping Generator

It is essential that IT keep pace with competitive and fast-moving business environments, which means IT must operate with efficiency, speed and agility.

IT projects are frequently viewed as a significant cost, yet at the same time they are known to be crucially important to delivering technology that transforms how business operates. Keeping this in mind, it becomes readily apparent that cost reduction has to begin within IT methodology.

PDI has created tools that use existing APIs to automate redundant and repetitive tasks, which create significant timeline reductions and significant cost saving.

## Product Description

PDI's Mapping Generator uses Informatica Java APIs to generate a Metadata Object file. This Metadata Object file can be then used inside Informatica via the PowerCenter Designer/Workflow Manager or Repository.

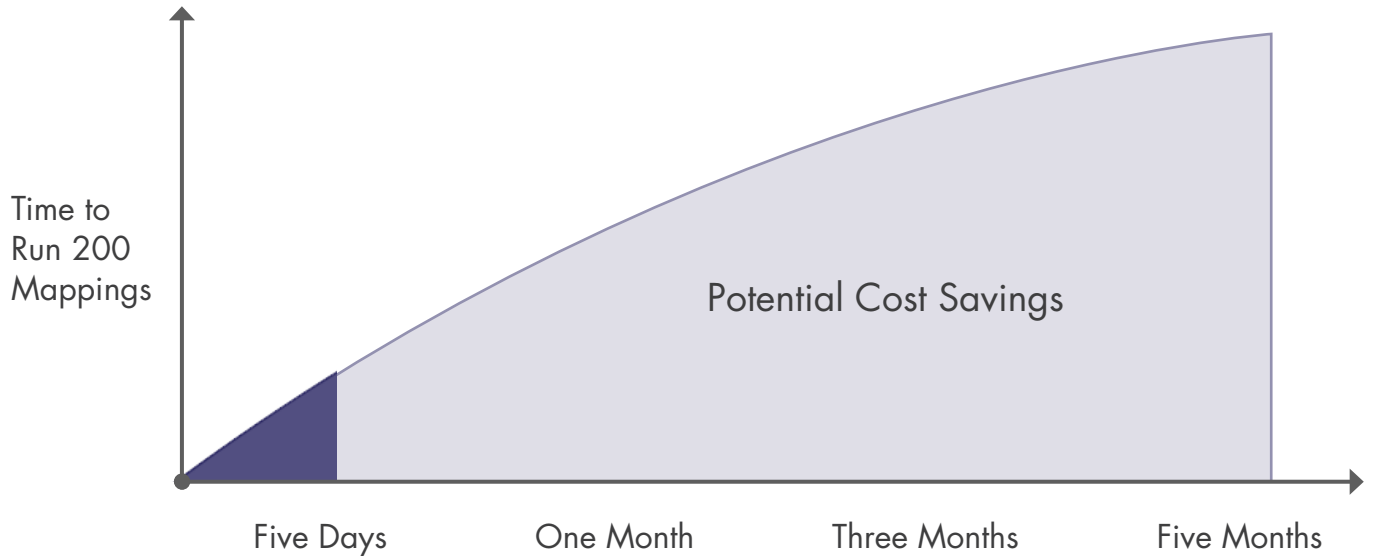
In order to generate a Metadata Object file, a user would first need to launch the Mapping Generator.

Once launched, the user would connect to a source database and a target database. The tool will then list all available tables in each database

Next, the user would manually create a connection between the source and target tables. Once all connections have been crafted, the user could create an Informatica Metadata Object file that contains information about the source and target database.

After the connection has been made, the Mapping generator can make any mapping between source and target or session and a workflow.

This means that the tool can generate nearly any sort of arbitrary mapping.



The typical five month timeline that 200 mappings would take is cut down to five days when using Pacific Data Integrators' Mapping Generator.

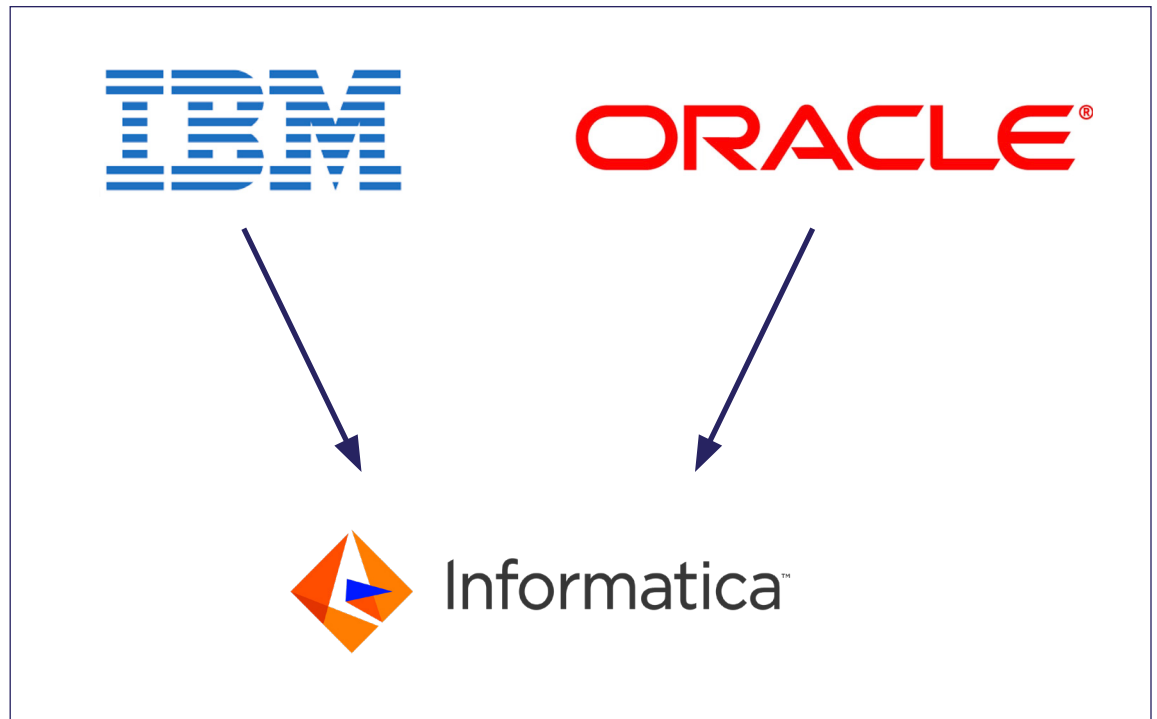
## Convert any ETL to Informatica

Our robust Mapping Generator is able to convert any ETL into Informatica in a significantly shorter time than a manual ETL conversion project would require. It is modular enough to read any metadata repository and convert it using our pre-built code blocks using Informatica API.

We have successfully used our Mapping Generator to convert platforms from:

- IBM Cognos ETL
- Oracle OWB ETL

Complete your own data conversions in record time and ensure your projects are successful, rather than attempting to tackle time-consuming conversions manually.



Clients have used our Mapping Generator to convert metadata from IBM and Oracle.

## Additional Supported Templates

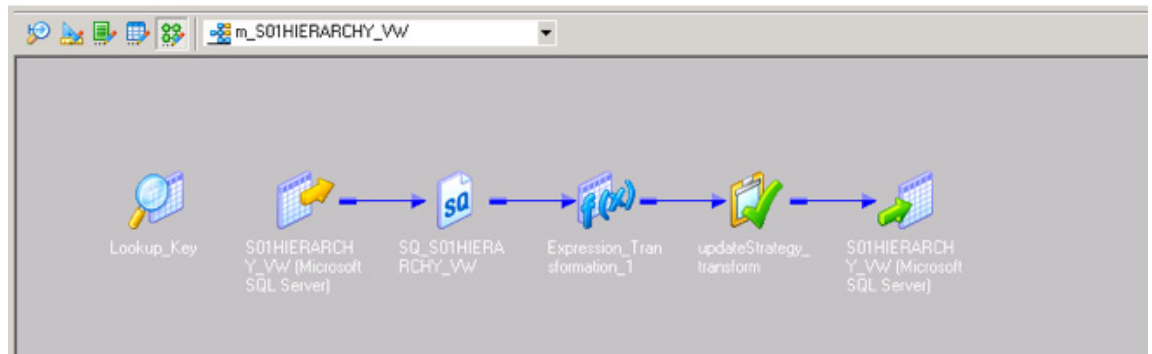
We took our advanced Mapping Generator a step further by creating several templates that can generate Informatica mappings in minutes; a process that could take a developer several days to build and test.

These additional functionalities leverage a template-based approach using Java API's. Templates are available out of the box in an easy-to-use excel file. For each template, our Mapping Generator dramatically reduces the time it takes to map various functions.

For instance, our Mapping Generator can produce an average Type 2 Dimension Load in fifteen minutes, where creating it from scratch would average one hour. Compounded by one hundred mappings, our clients have saved an average of 75 hours with our automation tools.

### Type 1 Dimension Load

This type of mapping needs to update existing rows. Note that a Type 1 Dimension Load does not maintain a history when updating rows with changes; it overwrites the existing rows. Our tool generates code that allows a customer to quickly and easily create a Type 1 Dimension Mapping for several dimension tables in a matter of minutes



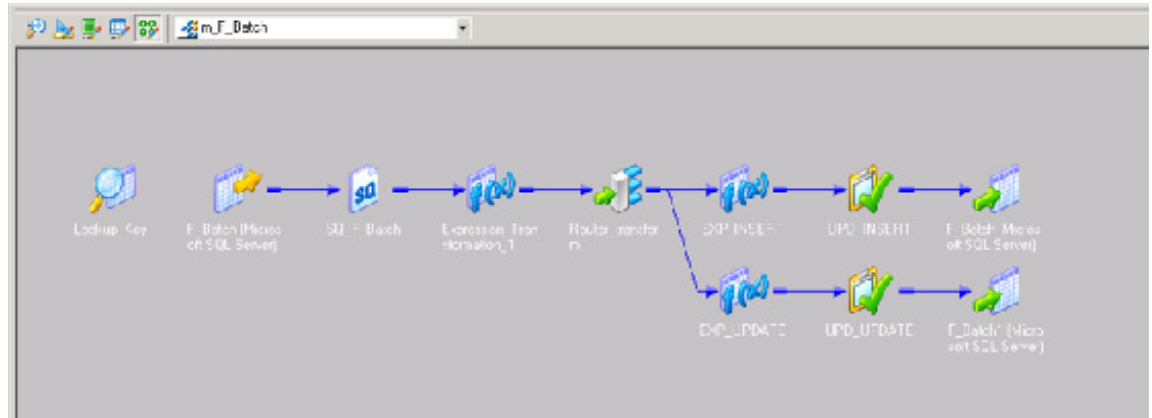
Example of a Type 1 Dimension Load Mapping

### Type 2 Dimension Load

A Type 2 Dimension Mapping also has the ability to create new rows

and update existing rows. Unlike a Type 1 Mapping, a Type 2 Dimension Load maintains a history when updating rows with changes.

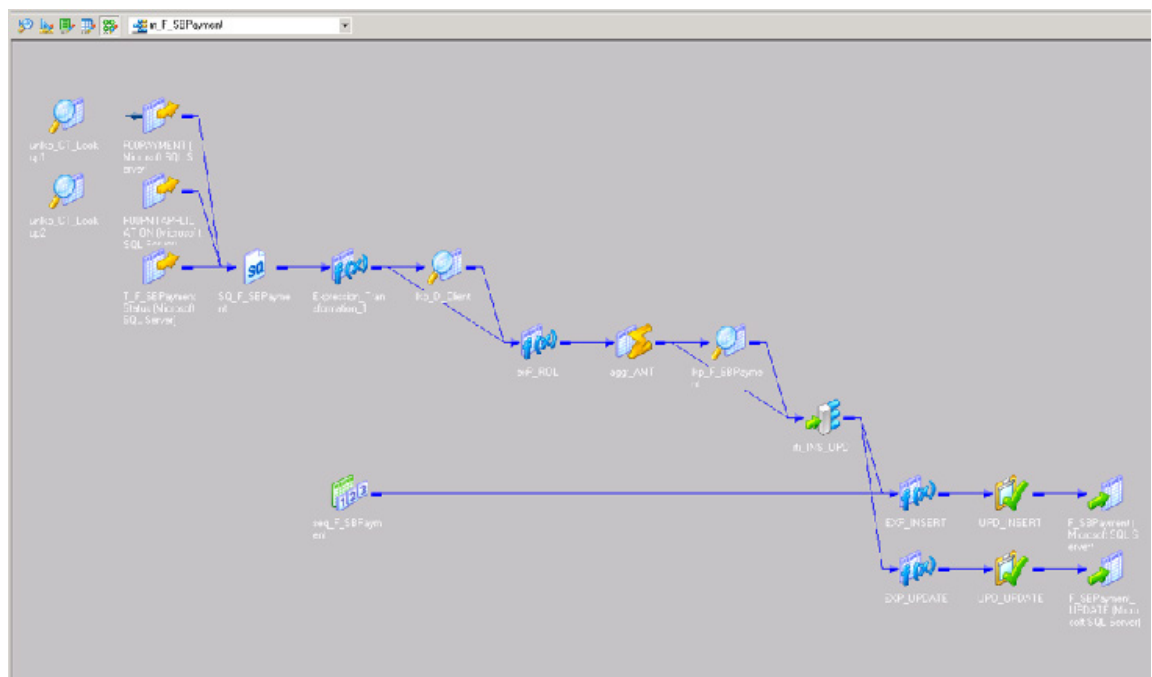
The tool can detect whether a dimension table is Type 1 or Type 2 and create mappings accordingly, based on the input configuration file. In addition, the tool has the intelligence to decide when a dimension has one column as part of the business key, or several columns.



Example of a Type 2 Dimension Load Mapping

### Fact Load Resolving Multiple Dimension Keys

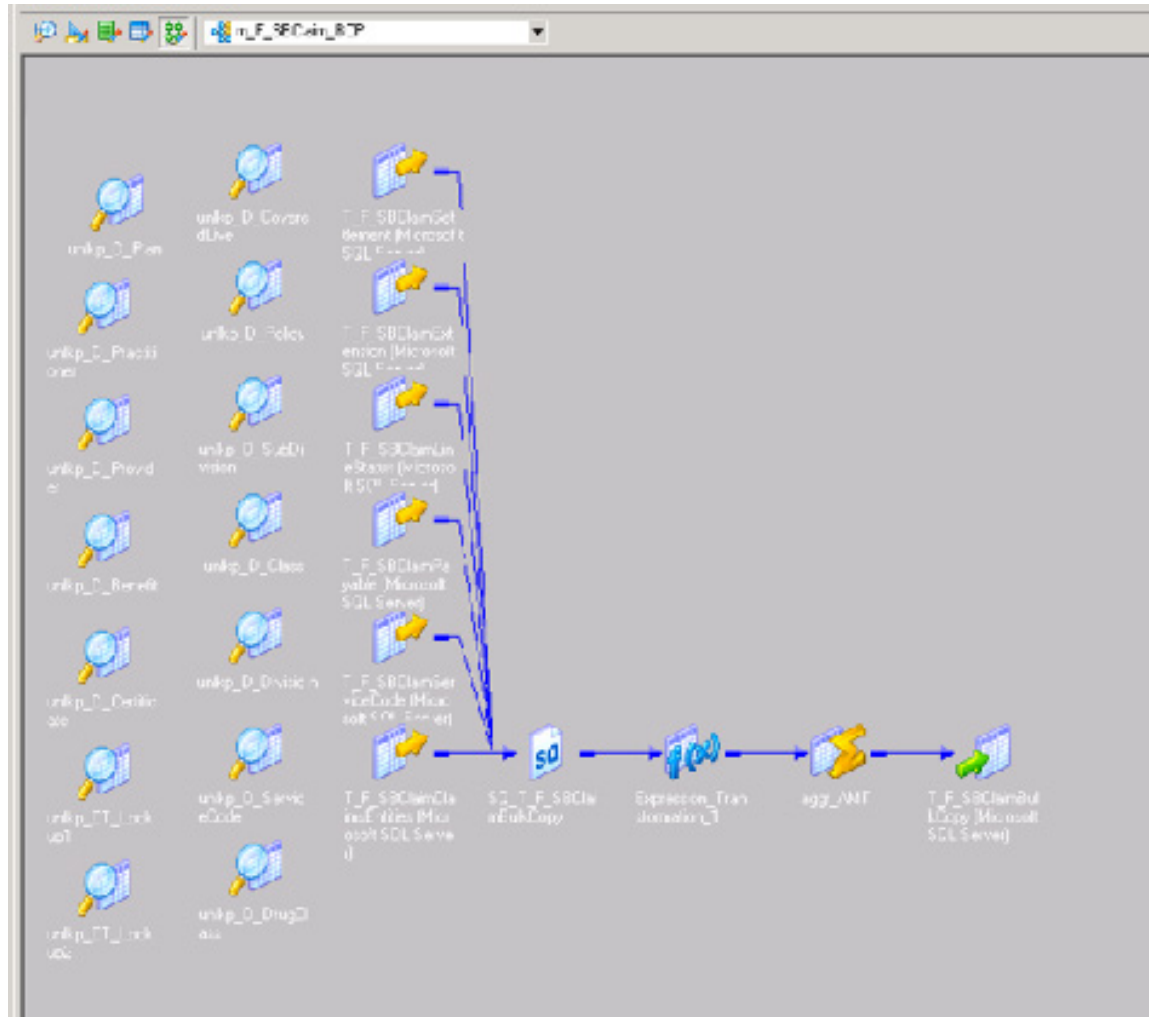
This mapping is used to resolve multiple dimension keys.



Example of a Fact Load Resolving Multiple Dimension Keys

## Aggregate and Summary Table Loads

Our Mapping Generator also has a template to support aggregate and summary table loads.



An example of Aggregate and Summary Table Loads

# Grid Health 360

An Unparalleled View  
into Utility Assets.

## Grid Health 360

### **Utility Asset Management**

Informatica and its partner, Pacific Data Integrators (PDI), believe that quality asset data hygiene should be at the core of any disaster solution. That is why PDI chose to leverage Informatica Master Data Management (MDM) and Informatica Data Quality for our Grid Health 360 Solution.

Grid Health 360 allows operators to reconcile transformer, meter, and pulse information to facilitate improved load and demand planning. It also allows customers to assess the smart meter vendor performance and the spread of behind-the-meter generation and storage capacity.

Highly-regulated, asset-intensive industries like utilities drive investment



decisions from the capacity and health of capital assets such as substations, transformers, smart meters, power lines, pipes and so on.

This makes maintenance a key lever to profitable and safe operations. Therefore, it is imperative that utility companies understand the condition of their assets, where they are located, and who they affect, all while analyzing the costs and benefits.

Informatica MDM creates a “golden record” of data, giving utilities data they can trust. MDM also allows customers to assess the smart meter vendor performance and the spread of behind-the-meter generation and storage capacity. With the Informatica MDM “golden record” of data, the following analytics are possible:

- Missing pulse resolution
- Identify need for supplier involvement or technician training
- Identification of unregistered solar panels or batteries
- Improved load planning
- Fraud mitigation

**Performance of different Meter Vendors in all Cities.**

Mtr Config Typ Cd	Mail City	Estimated	Good (Includes OutagemissingPulses)	Missing
SIEMENS	DEATH VALLEY		1	
	Richmond		1	
	Sacramento		1	
	<b>Total</b>		<b>3</b>	
OPOWER	Fish Camp		1	
	<b>Total</b>		<b>1</b>	
eMeter	Brodley	1		
	Carpinteria	1		
	DEATH VALLEY	1		
	Grass Valley	1		
	Jurupa Valley			1
	Las Vegas			1
	Newbury Park	1		
	<b>Total</b>	<b>5</b>		<b>2</b>
Qualcomm	Bakersfield			5
	Ben Lomond		1	
	Coalinga		1	
	<b>Total</b>	<b>3</b>	<b>2</b>	<b>5</b>

**Meter Vendors**

eMeter

OPOWER

Qualcomm

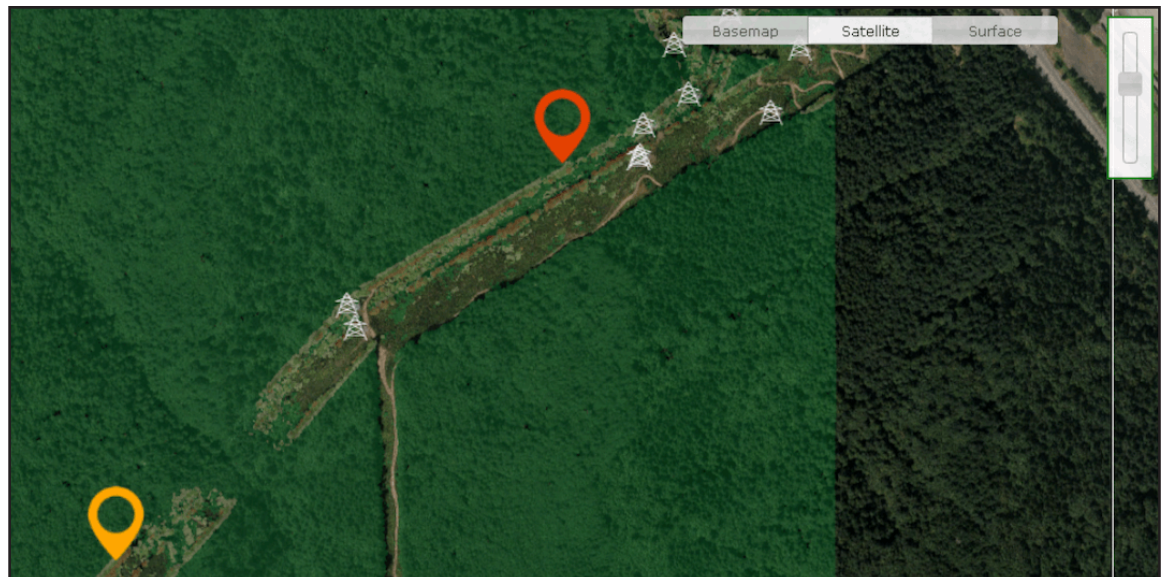
SIEMENS

Missing Meter Pulse Resolution

## Vegetation Proximity Analysis

Following the vast number of California fires this year, a spotlight is being directed at disaster preparedness programs. And while it is vital that disaster preparedness is in place, disaster avoidance can prove more effective both in terms of cost and reputation management.

Grid Health 360 integrates topographical and weather data in conjunction with fly-over LiDAR and other imagery, and overlays it with grid component information to assess vegetation encroachment. Overgrowth can cause “tree arcing,” which is the leading cause of outages for utilities, sparking up to 4,000 wildfires annually.



*Our Vegetation Analysis Tool identifies areas where vegetation, in close proximity to power lines, is at a higher risk of tree arcing.*

In order to inspect 200,000 miles of transmission lines and another 5.5 million distribution lines, utilities dedicate a majority of their \$5.4 billion annual maintenance spend to this issue.

By utilizing our solution’s risk-based deployment of vegetation management rather than the coarser, interval-based strategy that is currently in use by most operators, we estimate our customers will be able to save \$700 per brushmile.

## Vegetation Health Analysis

Topographical data, weather data, and fly-over LiDAR imagery powers our Vegetation Health Analysis, which allows customers to view vegetation levels in an area of interest, complete with health rankings. In short, this tool shows customers:

- Where trees are located in proximity to power lines.
- How healthy trees are relative to the surrounding vegetation.

To determine this, LiDAR data is paired with LasTools software and infrared imagery (RGBI or 4-band), and is used to create a 'vegetation index.' Within this index, our algorithms rank the amount of photosynthetic production, which allows us to identify where vegetation is located as well as how healthy trees are, relatively.

Our Vegetation Health Analysis Tool populates these vegetation details on a virtual map and flags high-risk areas, such as a dead tree that is at risk of falling on a powerline.



*Our Vegetation Health Tool identifies areas where dry or dead vegetation pose a higher risk of fire.*

In addition to populating on a virtual map, our Vegetation Health Analysis tool can integrate with third party reporting dashboards via SOAP or Rest API's.

This integration means our Vegetation Health Analysis can be displayed as alerts in a third-party tools such as Tableau, keeping utilities aware of high-risk vegetation areas.

Vegetation Health Analysis gives utilities information they can leverage to meet their safety numbers, prevent accidents before they occur, and save truckroll costs by giving dispatchers unprecedented intelligence. Information is power, and that power is now available to you.

## **LiDAR Data Acquisition**

At the core and center of our Transmission Pole Detection tool is Light Detection and Ranging data – often referred to as LiDAR data. LiDAR data is collected via aerial sweeps from airplanes or helicopters, which survey areas of interest using pulsed laser to collect data on variable distances of different objects.

Combined with other data, this information is able to create a 3D picture of the area of interest.

If a customer wants to bring their own LiDAR data to the project, we can leverage that data to produce a virtual map output that analyzes our customer's specific area of interest.

If a customer does not have their own LiDAR data, or their LiDAR data is out-of-date, we will work with them to gather the necessary information.

In these circumstances, our LiDAR data acquisition partners can work with customers to collect up-to-date LiDAR data that will be leveraged by our Grid Health tool.



## About Pacific Data Integrators

Pacific Data Integrators (PDI) is an Informatica partner with a strong emphasis in the utility industry. For more information about our MDM solution, call +1 800-403-5213, or visit [pacificdataintegrators.com](http://pacificdataintegrators.com). You can also connect with PDI via LinkedIn, Twitter, Facebook and Google +.

*Pacific Data Integrators developed Grid Health 360 and owns the intellectual rights to combining LiDAR data, satellite imagery and Informatica Master Data Management (MDM) to address vegetation management.*