

Streamlined Software Solutions for HERS Rating



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Advanced Building Analysis, LLC

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Who “we” are:

- Mike Browne: Rater, QAD, Trainer, etc.
- Steve Gardner: Rater, Software Engineer, SIPS Home Builder, etc.
- Advanced Building Analysis – Small HERS Rating Company in Massachusetts
- Energy Raters of Massachusetts, Inc. – HERS Rating Provider working for Independent Raters in Massachusetts

Partners in crime:

- AEC, Pivotal Energy, Ekotrope, Canvas



Audience: Who are you? Why are you here?

- Raters?
- Providers?
- Trainers? (you are supposed to be at the Trainer Roundtable!)
- Program Administrators?
- Software Companies?
- Builders?
- Architects?
- HVAC Contractors?
- Anyone else?



Visions from Past RESNET Conferences

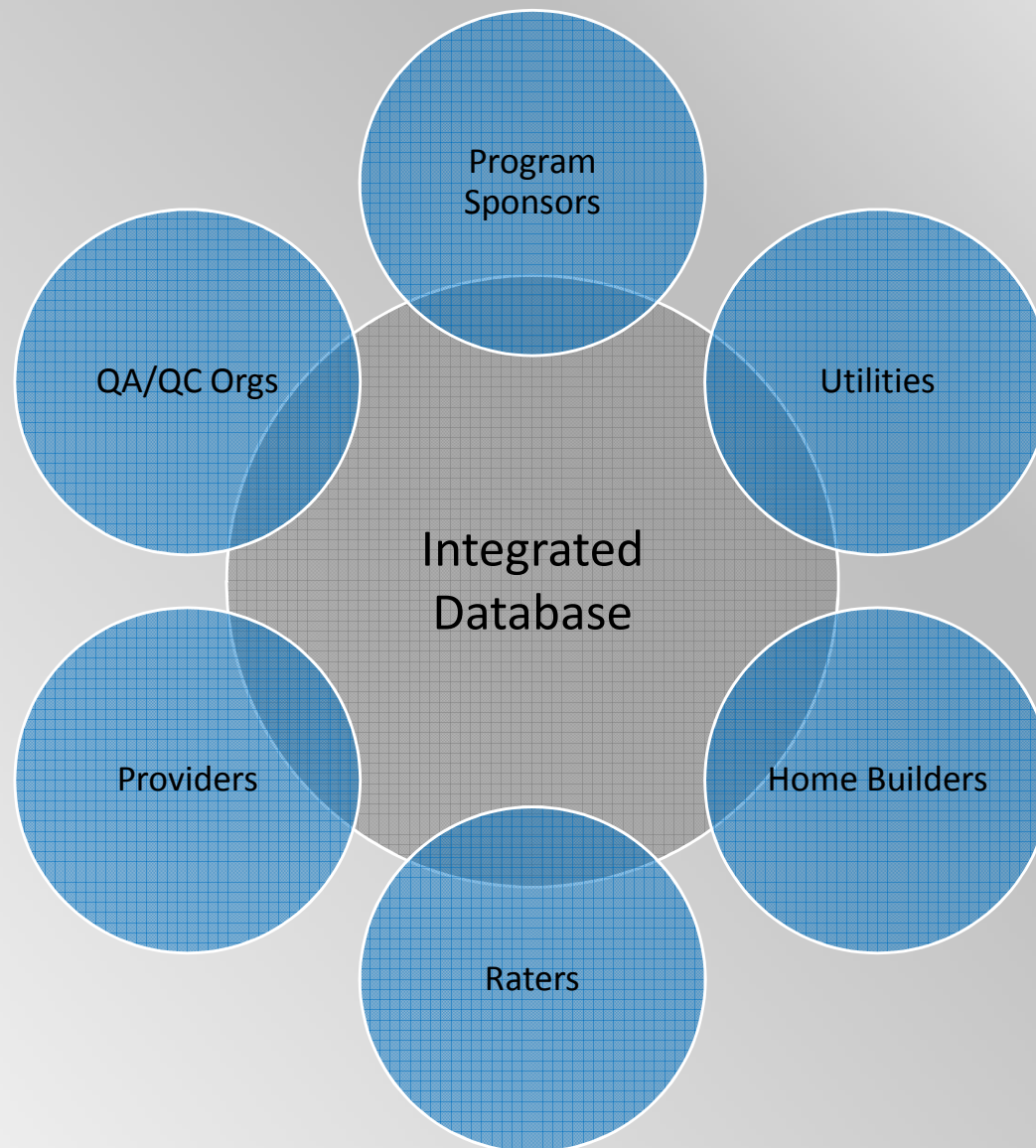
- 2009 RESNET - New Orleans
House Characterization - Reducing Program Costs
Presenter: John Tooley, Advanced Energy
St. Charles Room A
- 2011 RESNET Conference
Using Fully Automated Energy Audit & Energy Rating Systems
Presenters: [Ken Riead](#), Hathmore Technologies, LLC [Sharla Riead](#), Accurate Rater Network
- RESNET 2012 COncference
How Are You Going To Manage All That Paperwork? Practical Software Solutions
Presenters: Daran Wastchak, DR Wastchak, Robert Burns, Burns Consulting, and Steve Byers, EnergyLogic



Who needs a better process? Everyone?

- **Raters – Primary Perspective for this Presentation**
- **Providers – Secondary Perspective for this Presentation**
- **Clients – Builders, Developers, Architects, Home Buyers**
- **Programs – Code Enforcement, Utility, Tax Credits, Financing, Marketing**
- **Software Providers – Energy Modeling, Database, Field data collection, Reporting, Interoperability**
- **Others? Subcontractors, Home occupants, Realtors, Bankers, Insurance Co.'s, Assessors, etc?**





Streamlining Overview

1. Identify Parts of the process.
2. Streamline functionality of the parts.
3. Map the connections between the pieces.
4. Fit the pieces together.
5. Share the data and automate the updates.

Parts of the Process – (Rater Perspective)

- Client Introduction
- Program Enrollment
- Energy Modeling
- Field Data Collection
- Client Communications
- Program Reporting
- QA



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Streamline the Parts

- **Standardize Client intake**
- **Standardize Take-offs for Energy Modeling**
- **Standardize Field Data Collection**
- **Automate Database Entries**
- **Automate Client Reporting**
- **Automate Program Enrolment and Reporting**



Streamline Take-offs for Energy Modeling

- **SketchUp Overview**
 - From Plans
 - From field measurements
 - For QA File and field review
- **Examples of SketchUp Features**
 - Totaling areas, Calculating volume, Visualizing the thermal boundary – making sure the boundary is closed
 - Photo matching
- **Example of SketchUp Output**



Streamline Field Data Collection

Dispatch -> Field Rater -> Database

- Existing Examples –
 - custom paper,
 - .xls,
 - .pdf forms?
 - Mobile Apps...

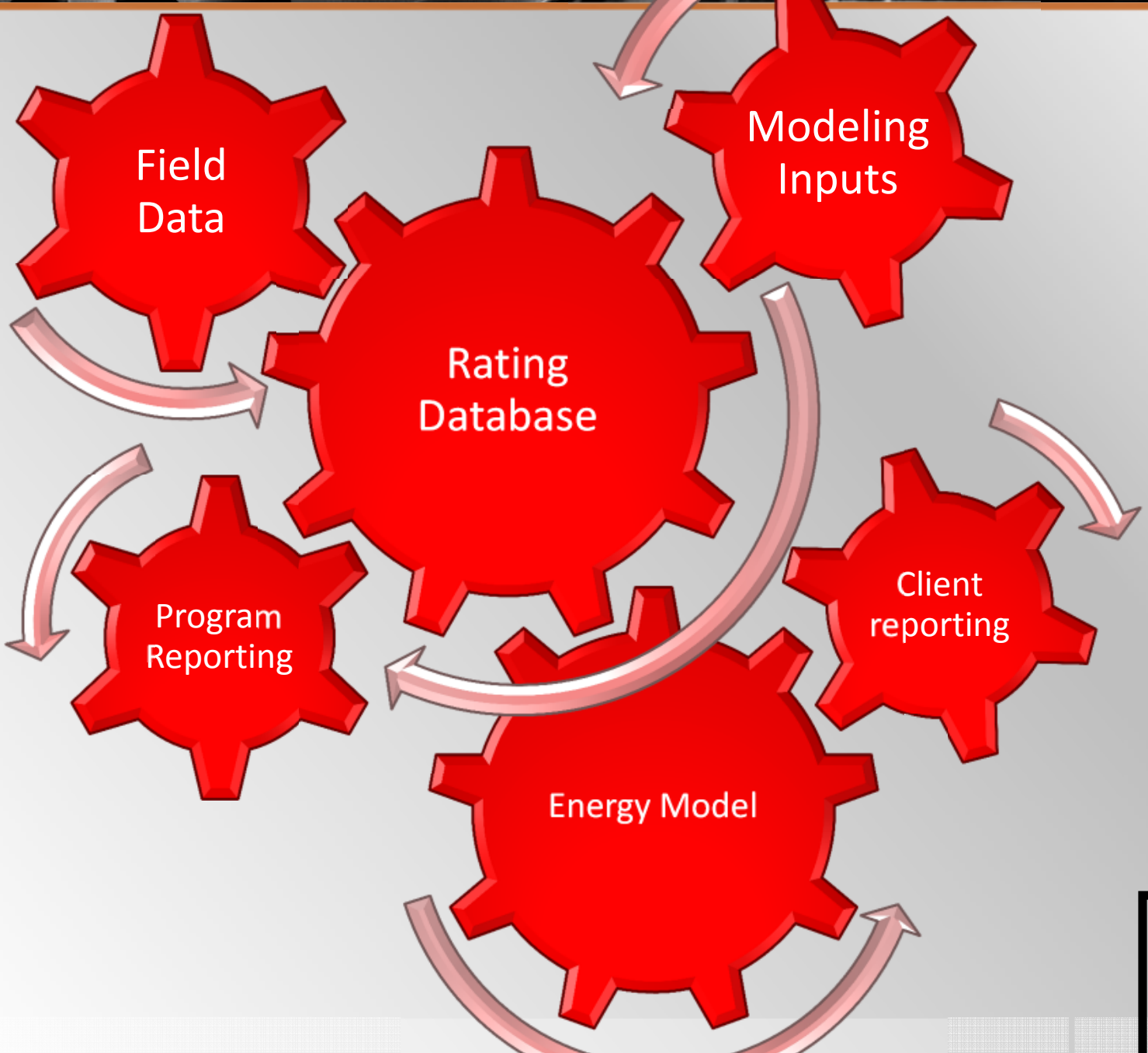


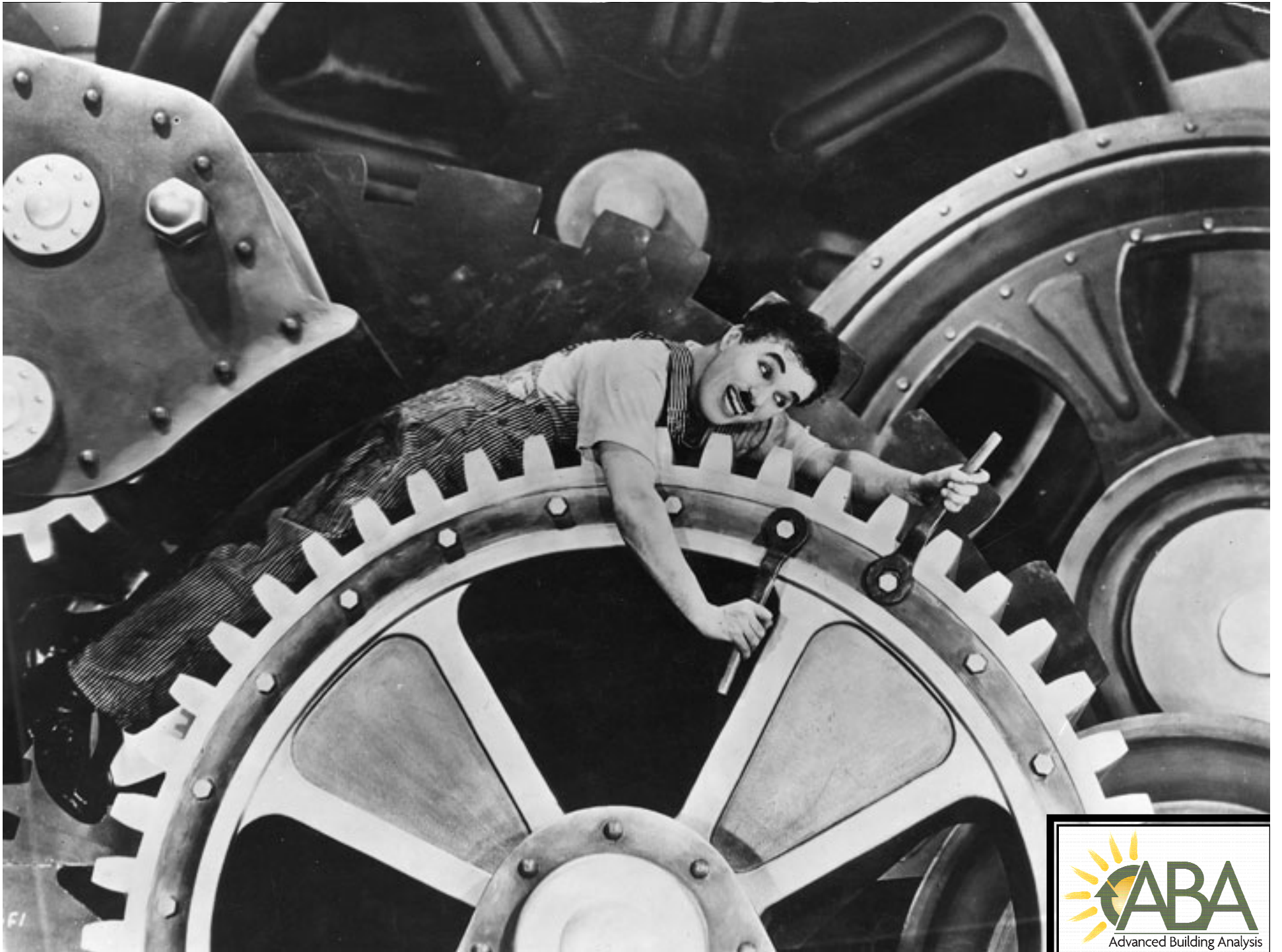
Mobile Field Data Collection Example

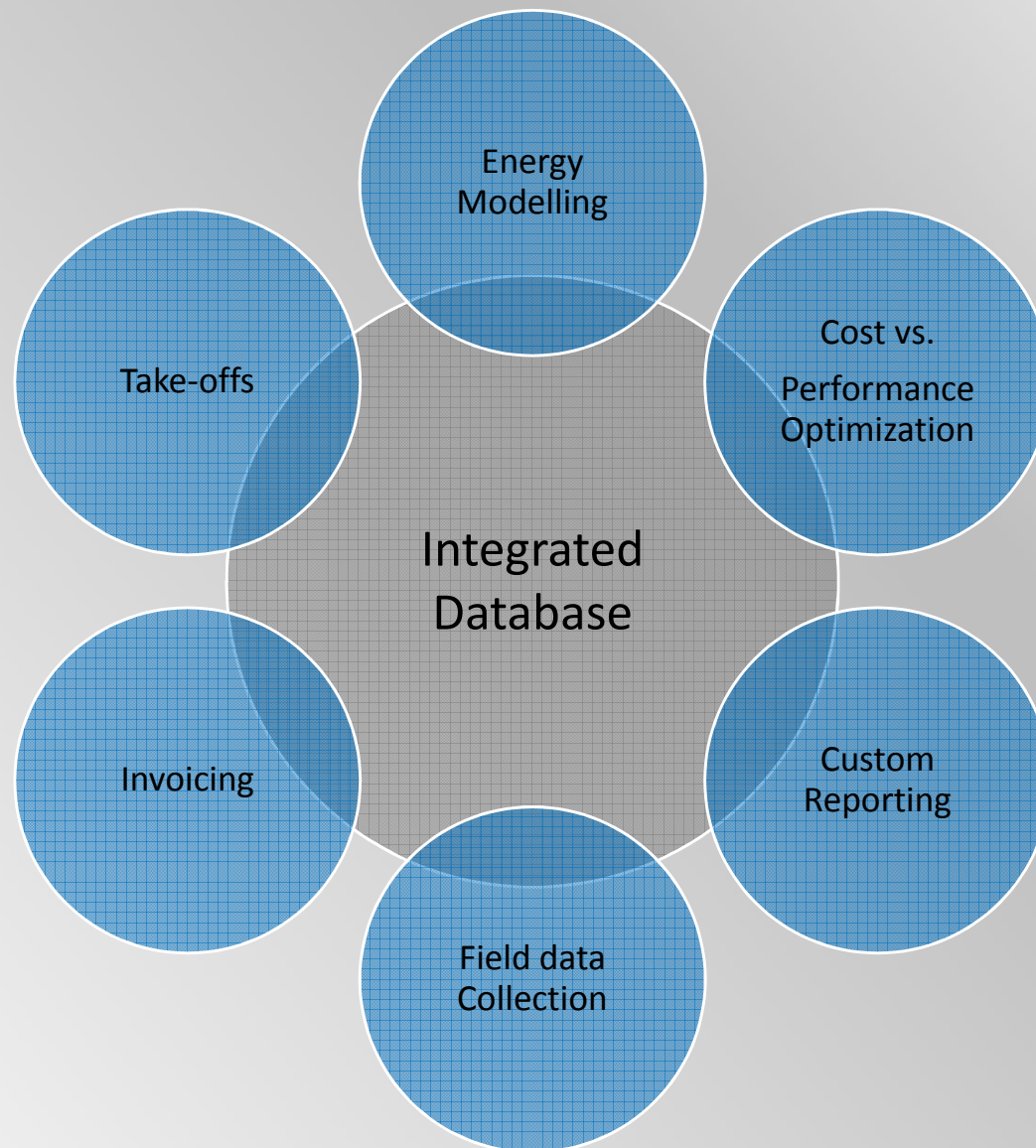
- Canvas Example Overview
- Examples of Canvas Features
- Example of Canvas Output

Mapping the Flow of Data

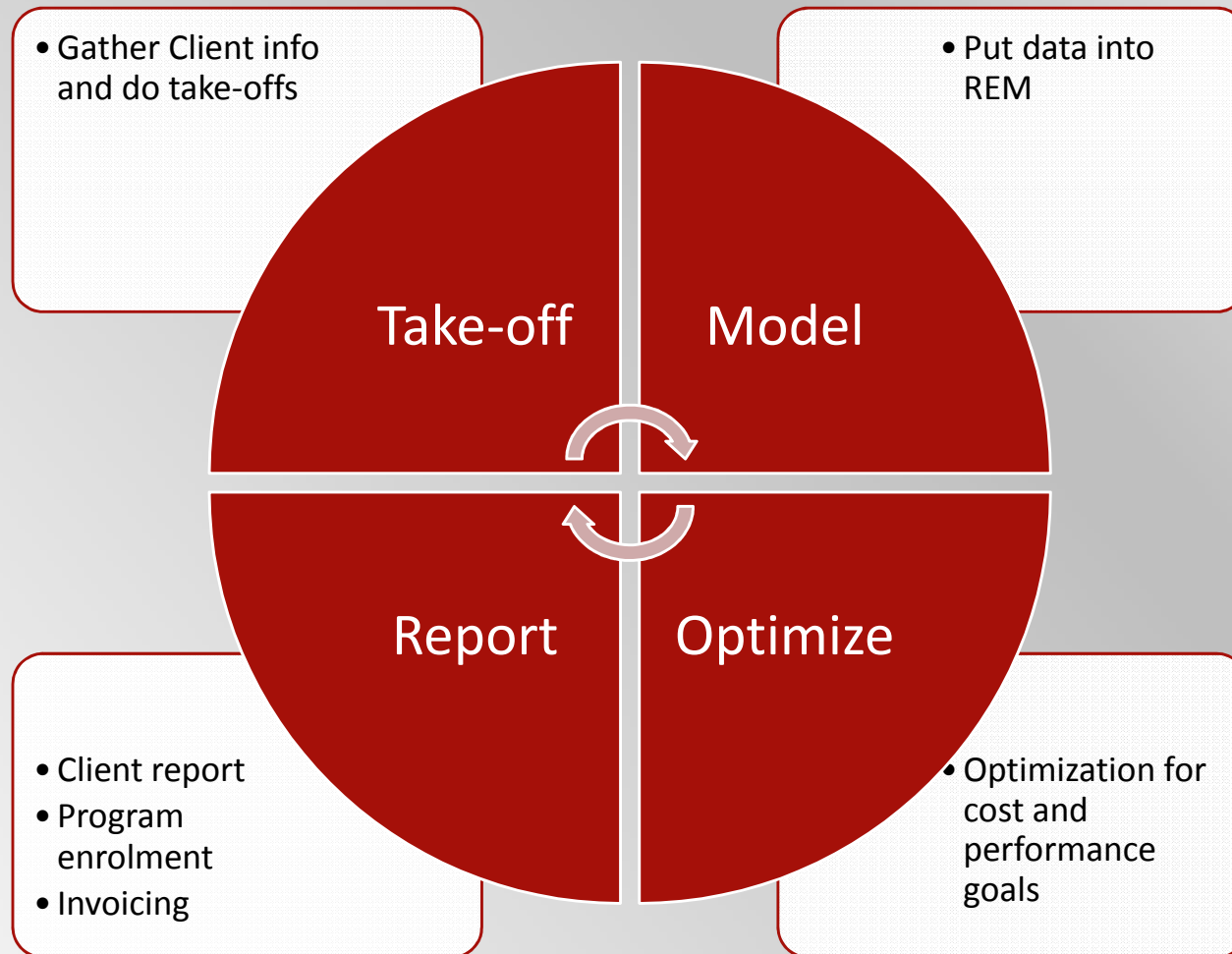
- Importance of a Central Database or Hub for information exchange.
- Example Rating Flow...



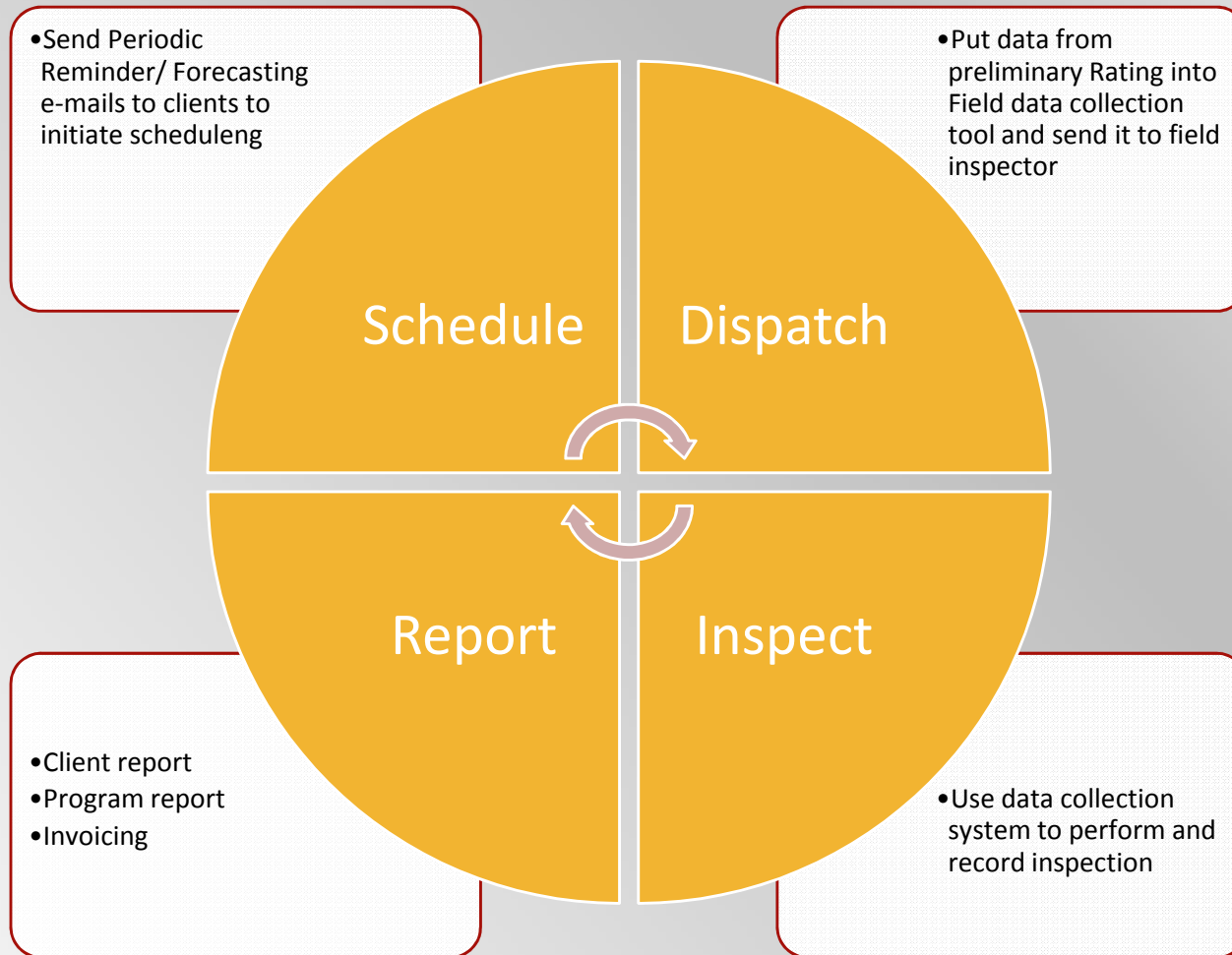




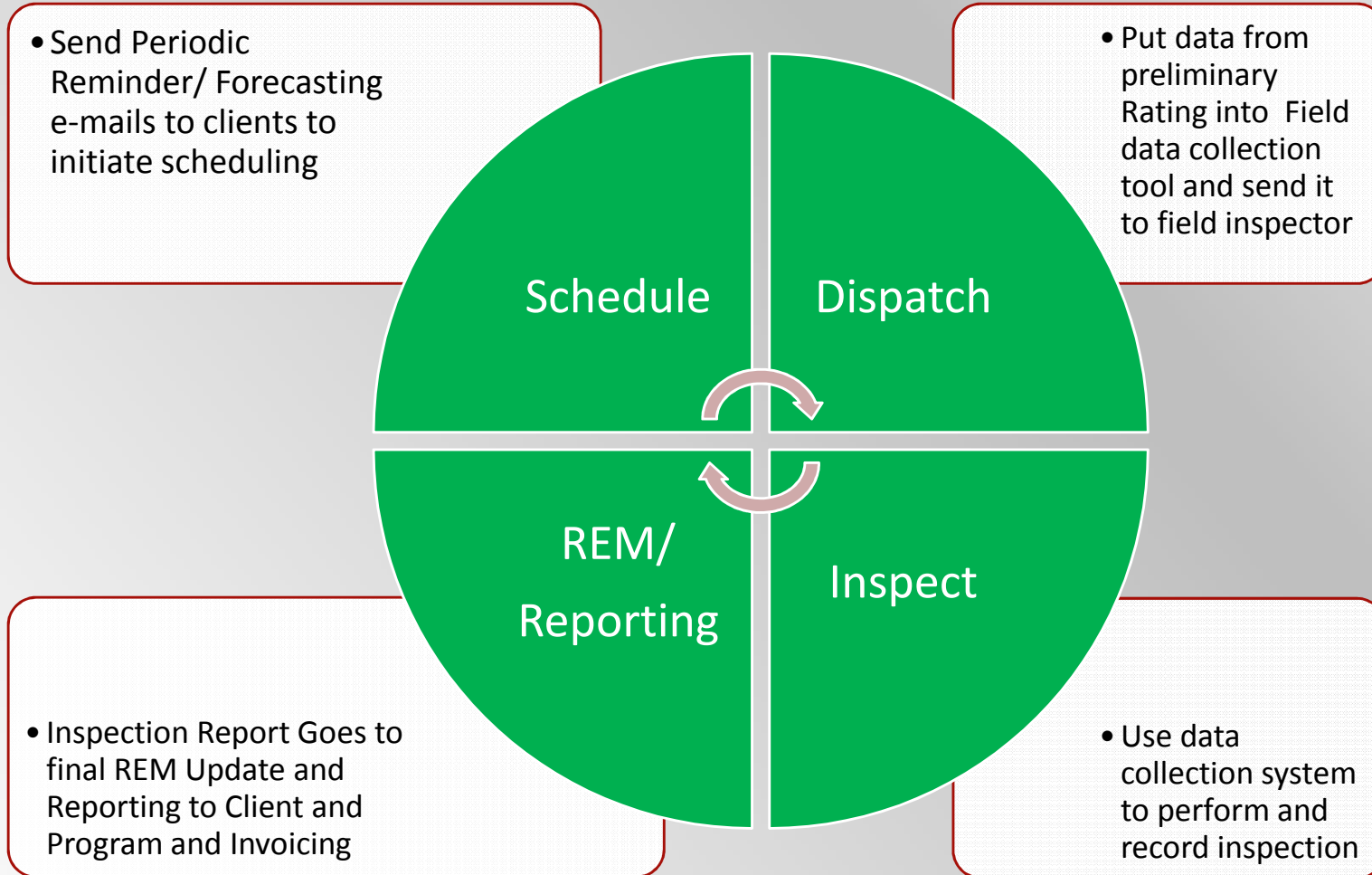
Preliminary Rating



Mid-point Rating



Final Inspection



File QA of Ratings

- Can be done after Preliminary, Mid-Point or final
- DB -> Scheduling, Take-offs, Field Data, and REMs
- QA file review -> DB -> Reports

Field QA of Ratings

- Can be done after Mid-Point and final
- Scheduling -> DB -> Field Data Dispatch
- Field data results -> DB -> Energy modeling
- Energy modeling -> DB -> Reports

Building the Database Hub

- To include all of the data-points to be shared across the different software involved.
- Using Consistent, open source data format for interoperability
- Flexibility, “Anti-Fragility”
- Filtering – ability to be sorted , organized by different fields.
- Batch-processing of selected fields and files
- Templates

Automatic Integration

- Automatic updates
- Synchronize upon completion of steps
- Rater review/ confirmation before broadcasting of results



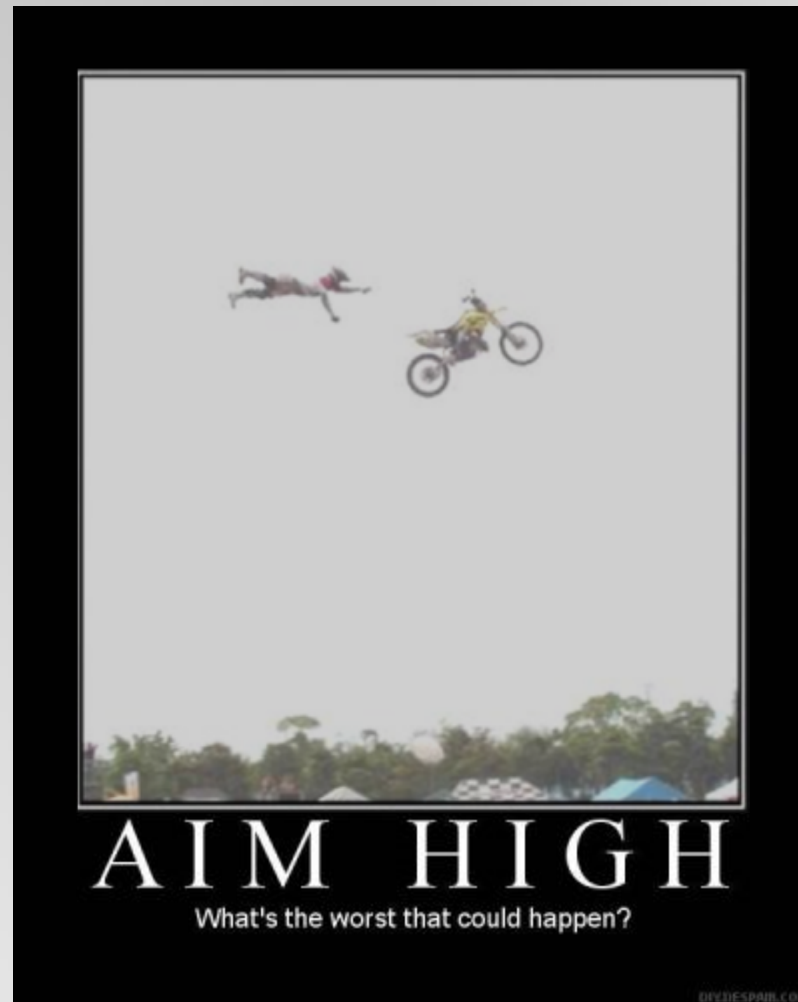
ready, set,



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go ...



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