ALTURA

A Model for Centralized Tagging of Integrated Building Systems

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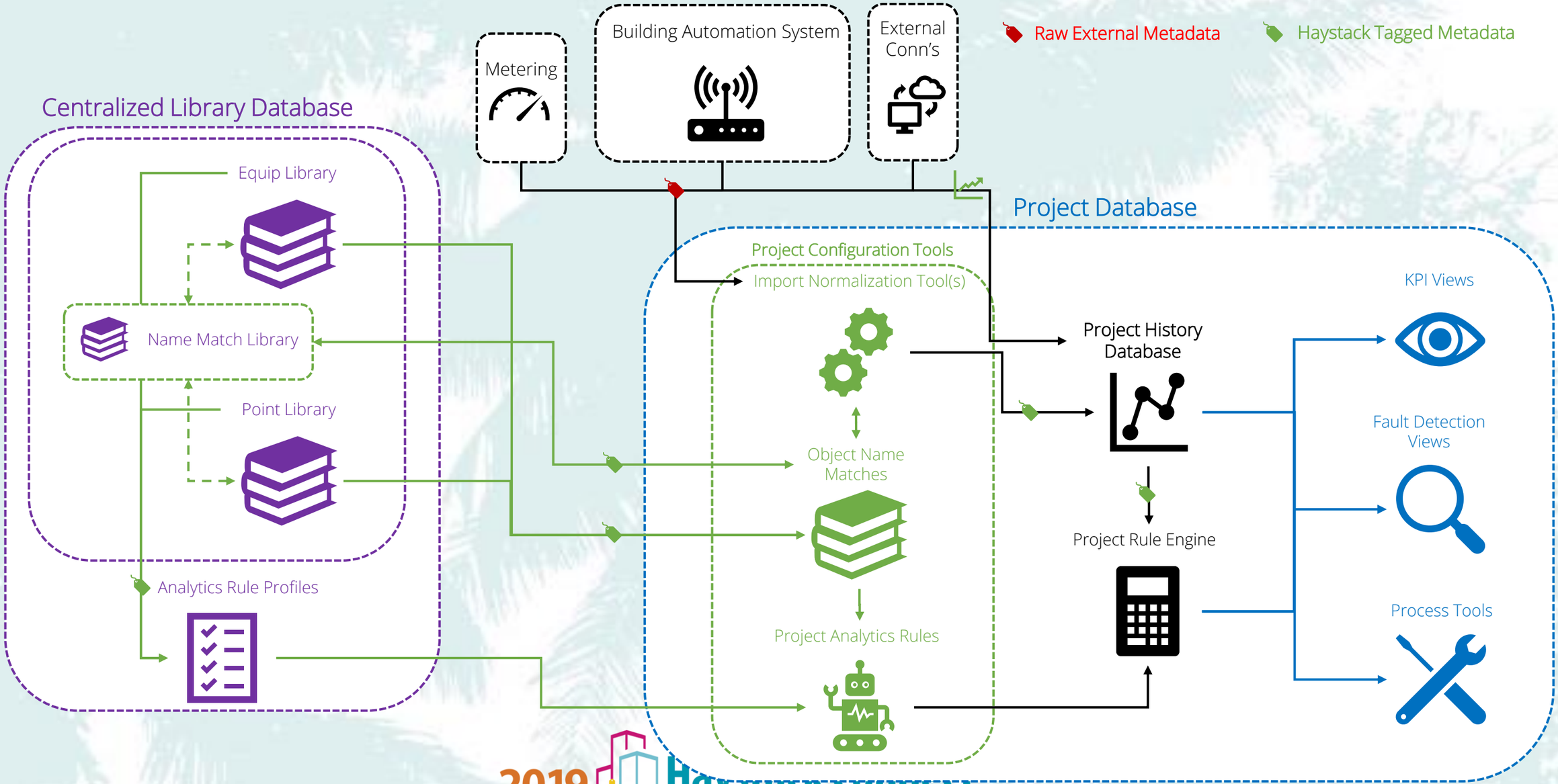
Agenda

- Define Objective
- Point Tag Mapping Strategy
- Equip Tag Mapping Strategy
- Rules and Views Templatization
- **Integration Model Opportunities**
- **Project Haystack Opportunities**

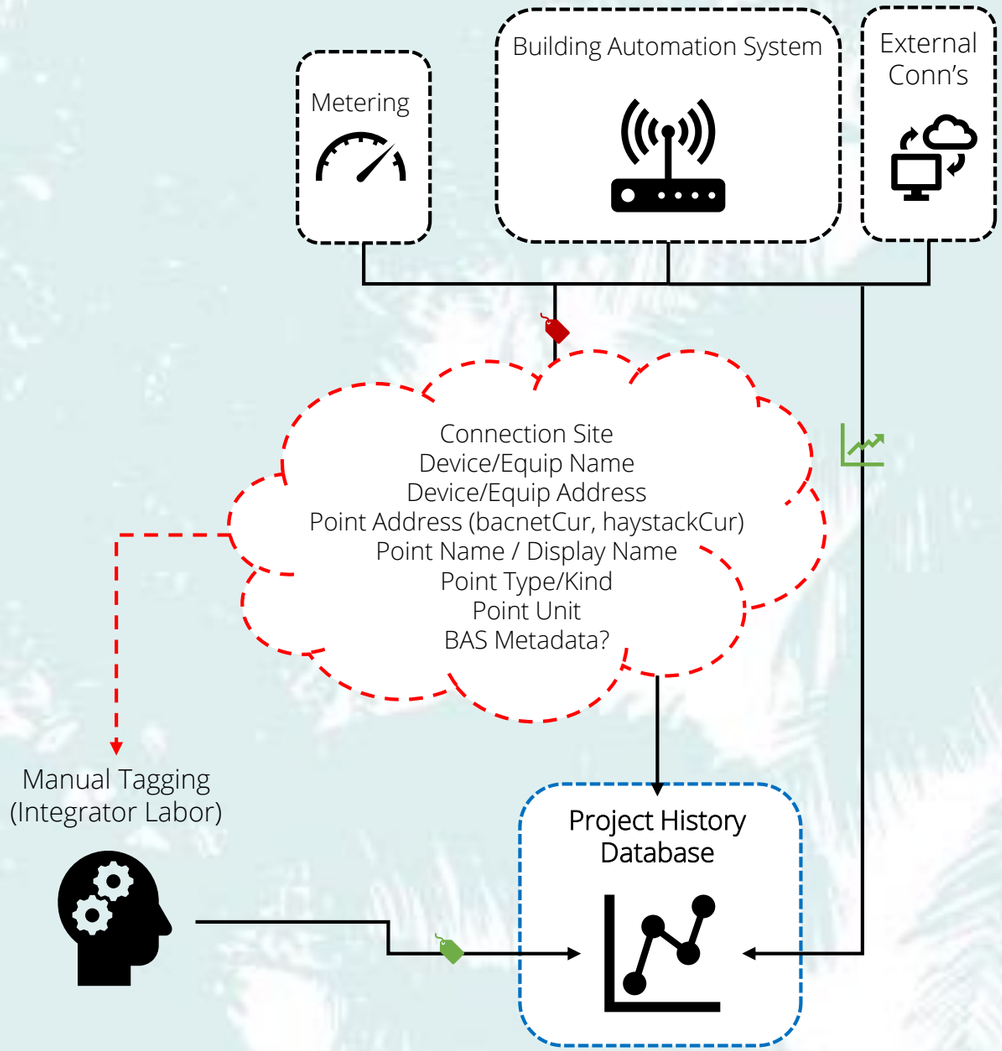
Building Analytics Tagging Objectives

- Standardized via Haystack
- Designed for Consistent and Rapid Deployment
  - Empower Project Engineers as Integrators
  - Rule and View Templatization
- Scalable to Diverse Building Portfolios
- Enable Project Management Processes, Tools
- Reduced Integration/Modeling Costs

Centralized Haystack Tagging Model



Stand-Alone Database Structure



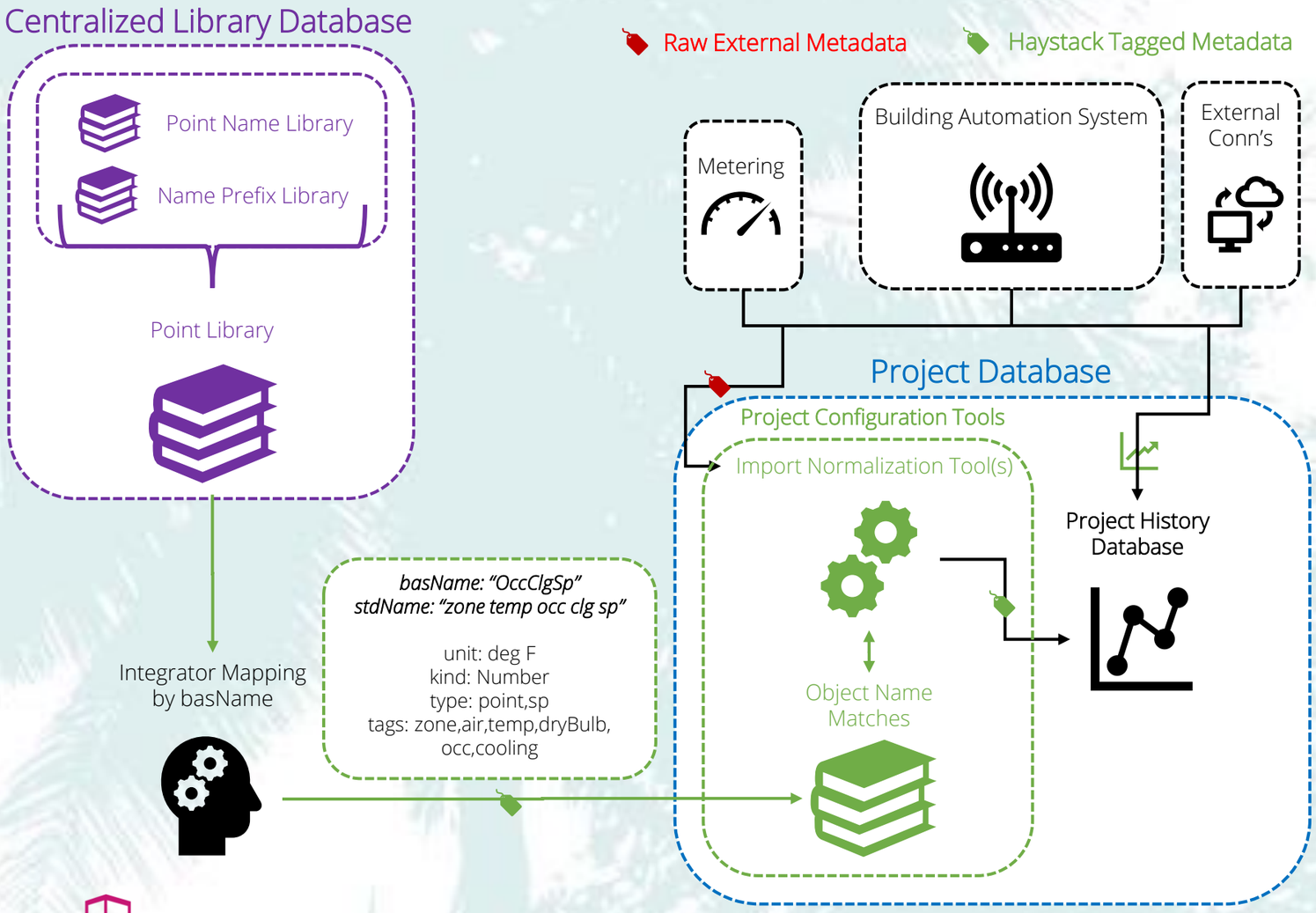
- Only Basic Descriptive External Info
- Varying External Naming Formats
- Tags Applied Individually
- Requires Complex Integrator Understanding of Haystack Schema

- ***Significant Time & Cost!***

Raw External Metadata Haystack Tagged Metadata

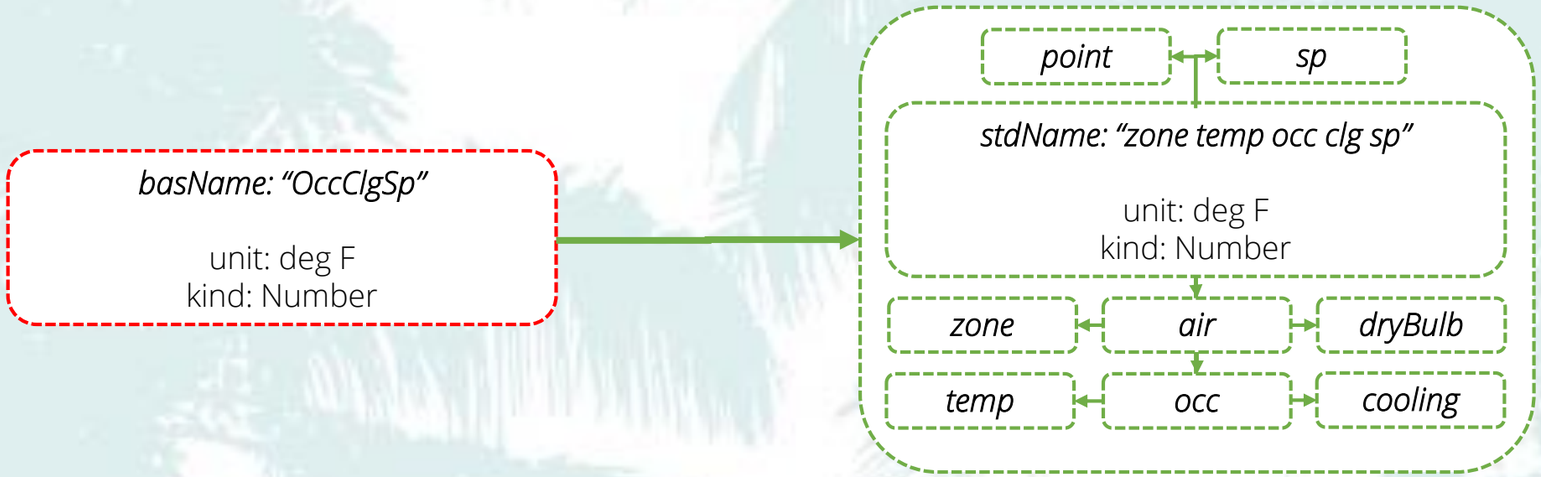
Library Standards and Project Configuration Tools

- Config Tools Map External Names to Haystack Tag Sets
- Haystack-Based Tag Libraries Mapped to Point Objects:
  - Standard Name
  - Name Prefix



Standard Naming As a Tag Key

- Normalize Display of Points Across Buildings
- Standardize Multiple Semantic Tags by Point Name
- Ensure Unique Tag Combinations for Point Queries



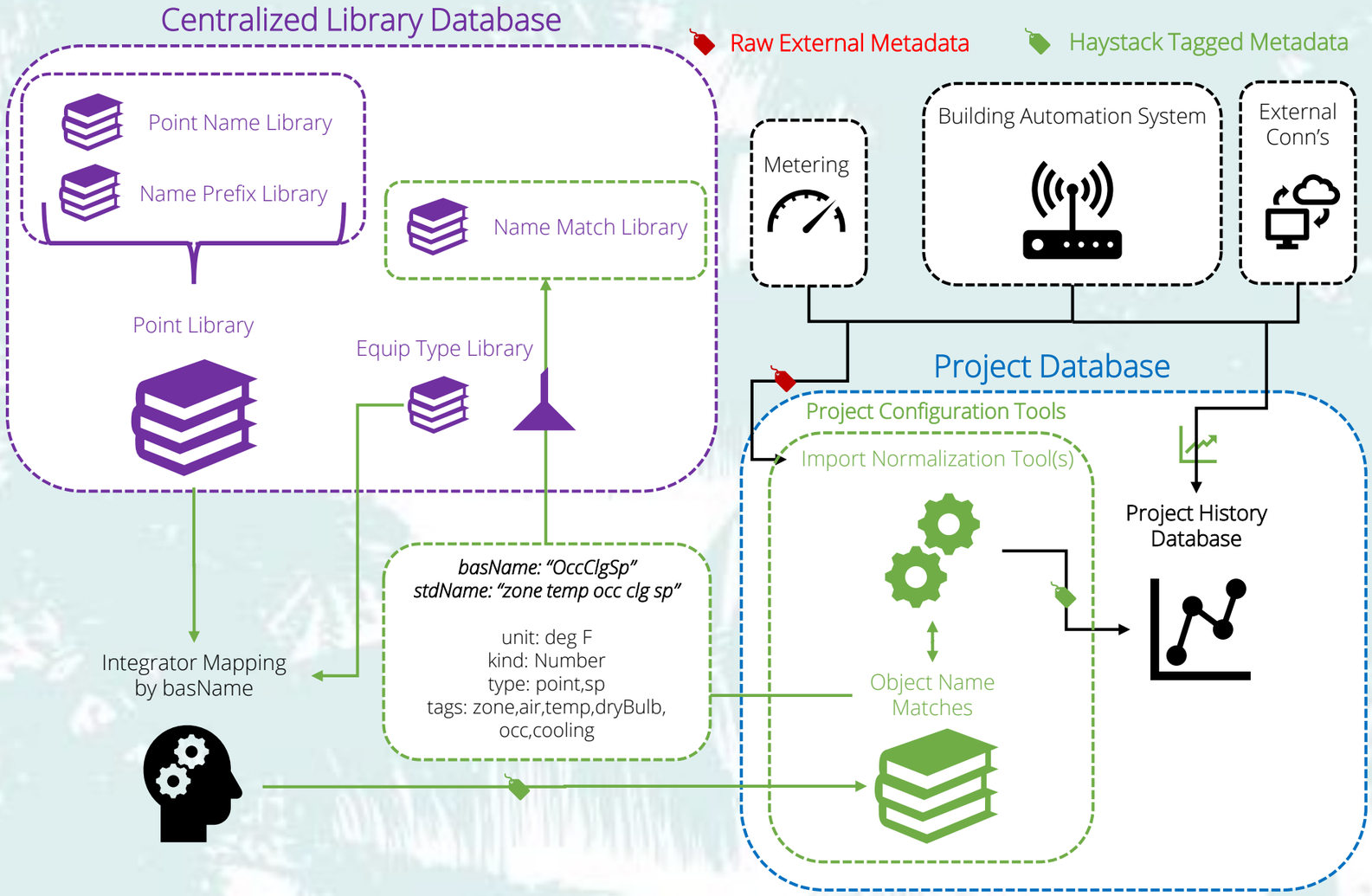
Tags by Term

- zone: zone,air
- temp: dryBulb,temp
- occ: occ
- clg: cooling
- sp: sp

Prefix Permutation

- avg zone temp
- min zone temp
- max zone temp
- remote zone temp
- local zone temp

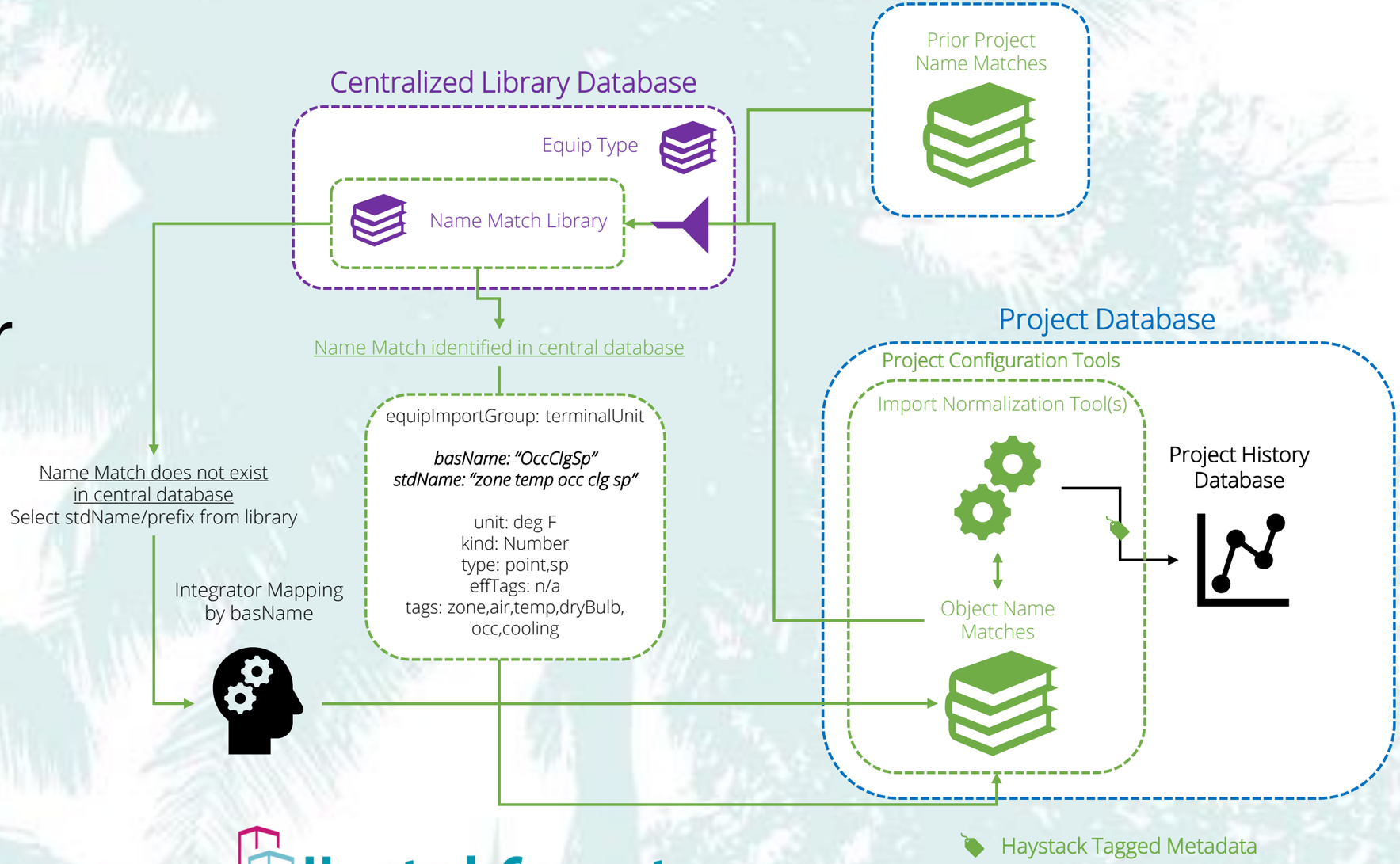
Equip Types and Name Matches



- Collect Library of BAS/Std Name Match Records
- Filter Name Matching by Equip Type

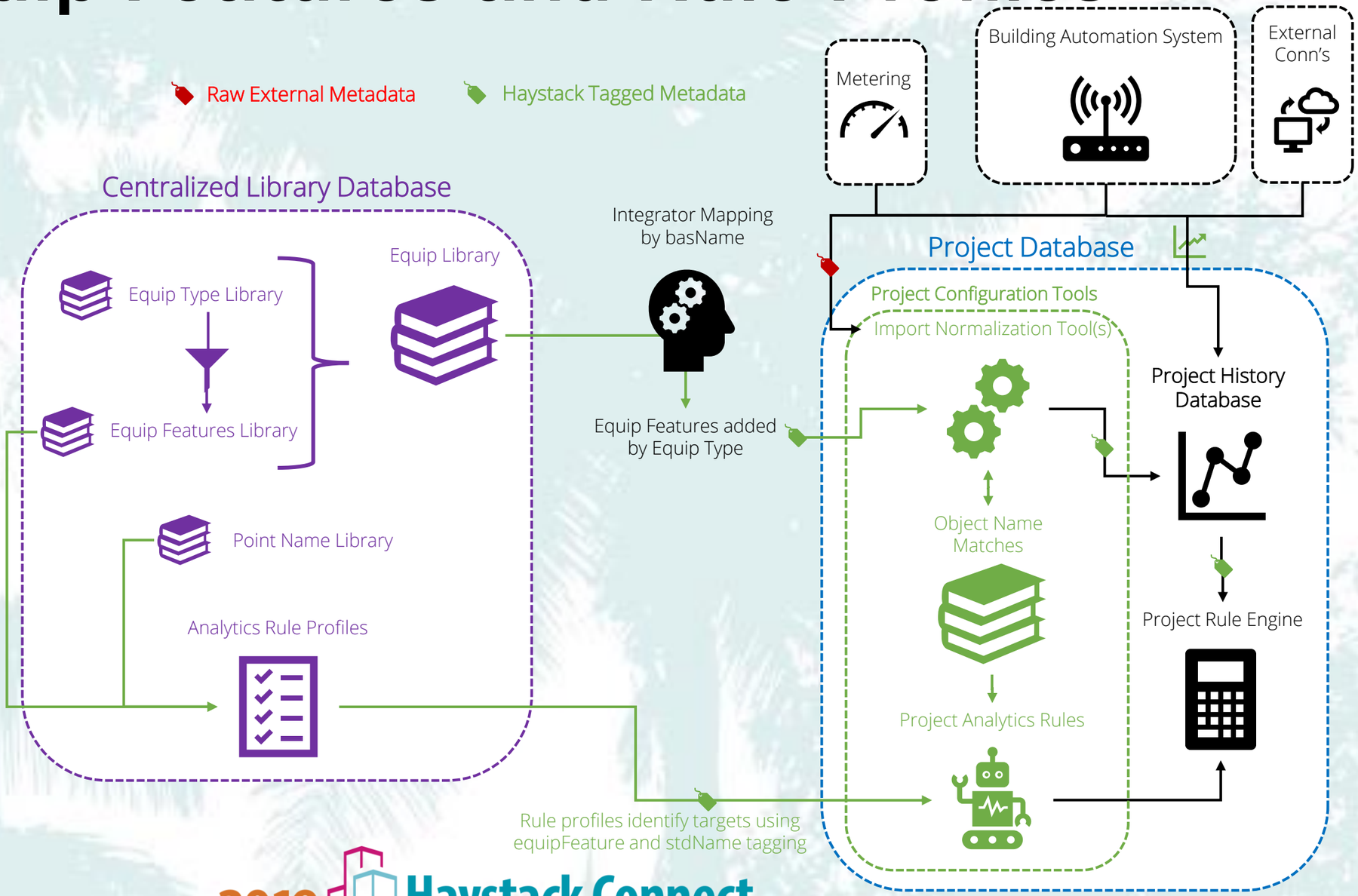
Name Match Feedback Loop

- Prior Project Name Match Evaluated for Applicability to New Project Integration



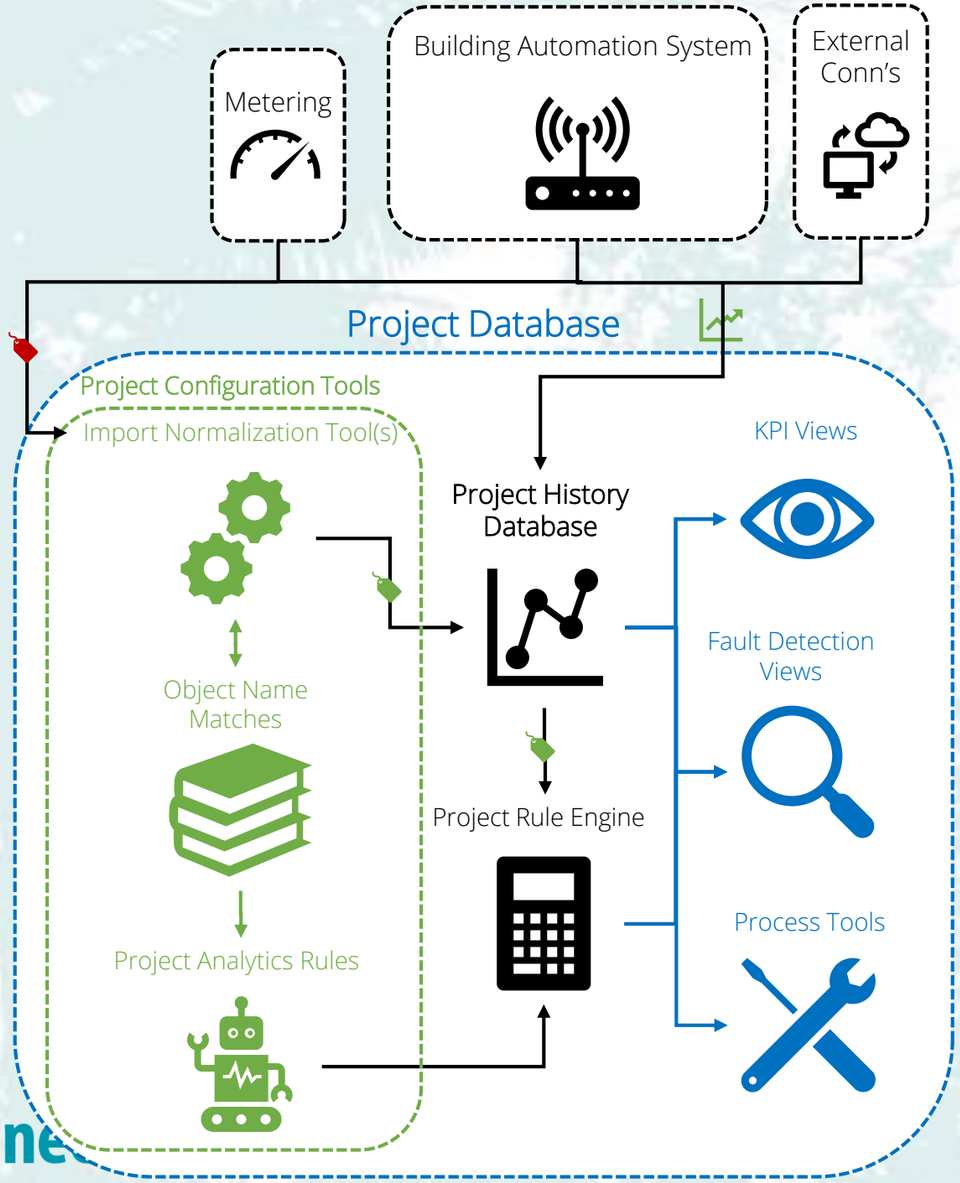
Equip Features and Rule Profiles

- Rules Query for stdName Tags
- Rules Applied by Equip Features



Enhancing Use of Analytics Results

- KPI and FDD Rules by Standard Tags
  - Queried by Point Name
  - Applied/Filtered by Equip Feature
- Process Tools Promote Project Development & Issue Resolution
  - Performance Dashboards
  - Facilities Asset Management
  - Data-Driven Issues Management
  - Work Order System Integration
  - Energy Opportunity Evaluation
  - Measurement & Verification Tools



Integration Model Opportunities

- Challenge Managing Point Name Interpretations across Project Engineers & External Automation Providers
  - Open-Source Name Match Collaboration
    - Opportunity for Pattern Detection

Project Haystack Opportunities

- Develop Standard for Common Haystack Tag Sets
  - Reduced Integration/Modeling Labor
  - Application Consistency
  - Unique Query Results
  - Vendor Templatization of Rules, Views, Tools

Project Haystack Opportunities

- Tag Schema Opportunities
  - Equip Control Facets
    - Demonstrate which Components are Controlled
    - E.g. exhaustStaticControl, exhaustStaticReset
  - Modulating vs. On/Off
  - Use of “effective”
  - Central Automation Optimization Components (ASHRAE GL-36)
    - E.g. Modular Equip Staging, Reset Control, Demand Response

Project Haystack Opportunities

- Extend Haystack to High Value Analytics Outputs:
  - Asset ID/Information Equipment Property Tags
  - Issues-Oriented and Action-Oriented (e.g. Work Order Integration) Equipment Property Tags
  - Terms for Modeling Performance
    - Baseline
    - Expected
    - Optimized

Altura Libraries Available to Community

- https://stackhub.org/org/alturaAssociates

- Point Name Library: https://bitbucket.org/alturaassociates/altura-standard-libraries/
- Name Prefix Library: Coming Soon!
- Equip Type Library: Coming Soon!
- Equip Feature Library: Coming Soon!

Questions?

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