Building Bodies of Knowledge with CBK Artifacts:
Demonstrating Mixed Artifact Use

7.19.19
We Use Three Core Components for This

**Knowledge Objects** for Packaging Model Implementations

**Library Repository** for Managing Knowledge Objects

**Activator** for Deploying Knowledge Object Services
A Knowledge Grid as Sociotechnical CBK Infrastructure

Technical API-enabled, federated platform for a future rich, open, useful, trusted CBK ecosystem
Knowledge Grid as Sociotechnical CBK Infrastructure

Technical API-enabled federated platform for a future rich, open, useful, trusted CBK ecosystem
A Vision of Sociotechnical CBK Infrastructure

END USER APPLICATION LAYER

FAIR CBK Layer with middleware tools

PLATFORM
Two Examples of Deployable Bodies of Knowledge

1. Pharmacogenomic BOK
2. Preventive Medicine BOK

(we reserve the term ‘collection’ for further understanding)
Example 1

Body of Knowledge

<table>
<thead>
<tr>
<th>Genotype to Phenotype Mapping KOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenotype</td>
</tr>
<tr>
<td>Phenotype to Drug Recommendation KOs</td>
</tr>
</tbody>
</table>

Blood Test Result

Actionable Recommendation

APP

Mixed CBK artifacts

CPIC®
Clinical Pharmacogenetics Implementation Consortium

Knowledge Grid
Example 2

Body of Knowledge

± 100 Features

Preventive Service Relevance (Inclusion/Exclusion Criteria)

Executive Procedural Calculation Knowledge

Preventive Service Cost/Benefit (in terms of life-gain)

Prioritized List

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Cleveland Clinic

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Summary

**Knowledge Objects** for 2 Bodies of Knowledge from organizations who are interested in them

**Library Repository** online

**Activator** running remotely & also locally with same KOs

**Demo apps** requiring more or less direct KO interaction