CKM rocks
SHARED KNOWLEDGE

OCEAN
health systems

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# CKM rocks:  Providing a CKM for Small & Medium Endeavours

Ocean Health Systems has developed and provided Clinical Knowledge Manager to the openEHR community for well over a decade. Now it is time for CKM to reach all healthcare groups within Australia and internationally.

## WHAT IS CKM?

A powerful collaboration tool to manage, describe, and understand clinical data models. CKM is the meeting point of clinicians who want to collaborate on models, and developers who want to use models. A simplified lifecycle of clinical models consists of creation, improvement, and system implementation.

Informal Discussions, Change Requests & Archetype Proposals

Formal Reviews (content, terminology bindings, translations)

Projects & Incubators

Use 5 mins or 1 hour of specialised clinician's time; instead of days in physical meetings.

## OVERVIEW

Making CKM available for smaller enterprises, with perhaps only one project, to use a small number of assets (maximum 50)

## PROBLEM

Clinical Knowledge Manager (CKM) instances are sold primarily as an "Enterprise Edition" on various tier levels.  This will need to adjust with the lifespan of digital health programs and political changes.
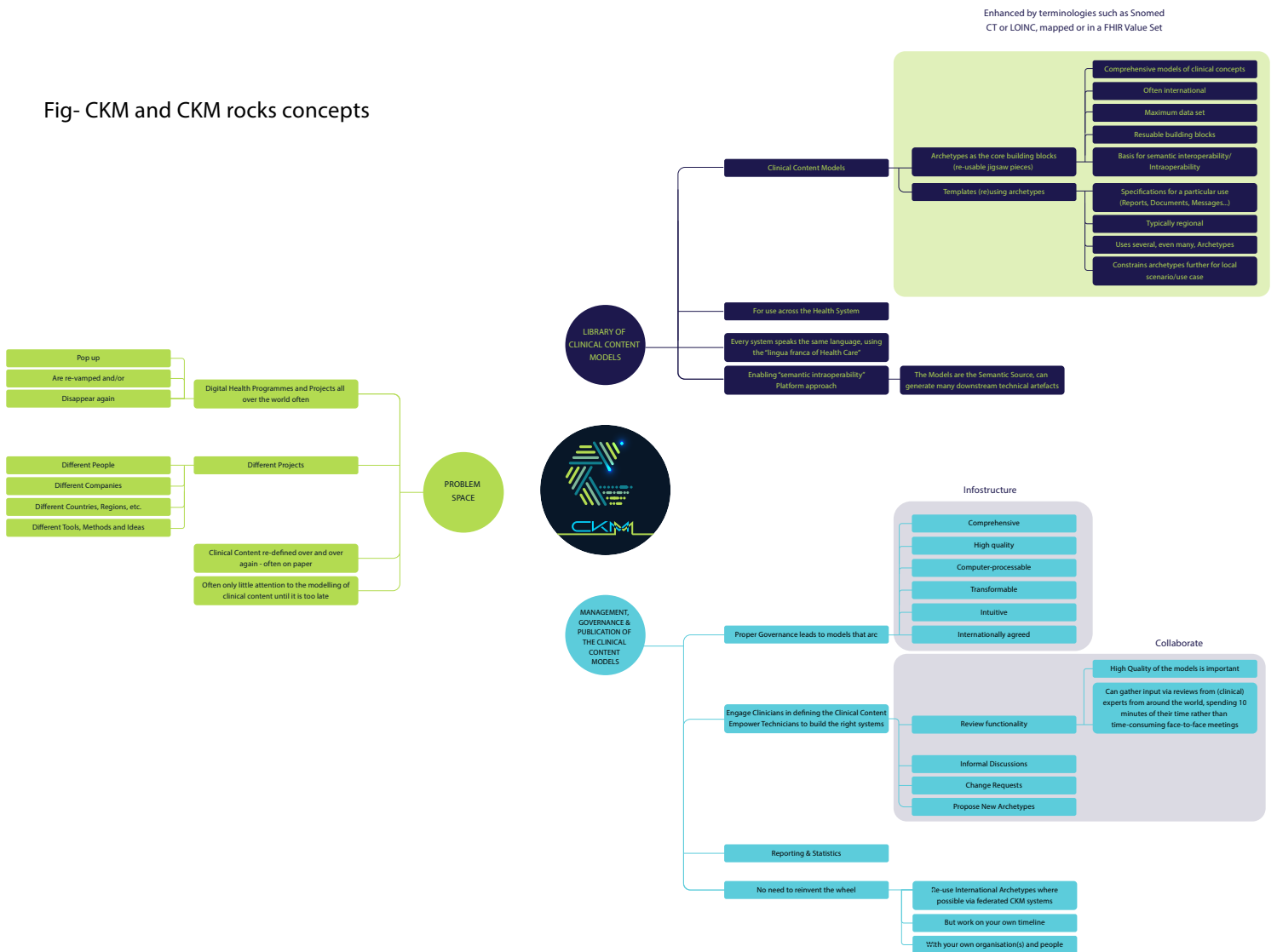
There is a known gap for CKM services for small and medium enterprises, organisation or endeavours of all kinds. In these cases, a full CKM is often oversized in functionality, management overhead and pricing.

# The solution is CKM rocks:

Ocean Health Systems are establishing a shared CKM instance for use by various customers that are willing to work in a shared environment with certain limitations. This shared instance if CKM comes at significant reduced costs to each customer and is called "CKM rocks". Customers can rent a project within CKM rocks and choose from various maximum asset levels.

Fig- CKM and CKM rocks concepts



Enhanced by terminologies such as Snomed CT or LOINC, mapped or in a FHIR Value Set

**Clinical Content Models**
- Archetypes as the core building blocks (re-usable jigsaw pieces)
  - Comprehensive models of clinical concepts
  - Often international
  - Maximum data set
  - Reusable building blocks
  - Basis for semantic interoperability/ Intraoperability
- Templates (re)using archetypes
  - Specifications for a particular use (Reports, Documents, Messages...)
  - Typically regional
  - Uses several, even many, Archetypes
  - Constrains archetypes further for local scenario/use case

**LIBRARY OF CLINICAL CONTENT MODELS**
- For use across the Health System
- Every system speaks the same language, using the "lingua franca of Health Care"
- Enabling "semantic intraoperability" Platform approach
  - The Models are the Semantic Source, can generate many downstream technical artefacts

**Pop up**
- Are re-vamped and/or
- Disappear again
- Digital Health Programmes and Projects all over the world often

**Different People**
- Different Companies
- Different Countries, Regions, etc.
- Different Tools, Methods and Ideas
- Different Projects

**PROBLEM SPACE**
- Clinical Content re-defined over and over again - often on paper
- Often only little attention to the modelling of clinical content until it is too late

**MANAGEMENT, GOVERNANCE & PUBLICATION OF THE CLINICAL CONTENT MODELS**

Infostructure
- Proper Governance leads to models that arc
  - Comprehensive
  - High quality
  - Computer-processable
  - Transformable
  - Intuitive
  - Internationally agreed

Collaborate
- Engage Clinicians in defining the Clinical Content Empower Technicians to build the right systems
  - Review functionality
    - High Quality of the models is important
    - Can gather input via reviews from (clinical) experts from around the world, spending 10 minutes of their time rather than time-consuming face-to-face meetings
  - Informal Discussions
  - Change Requests
  - Propose New Archetypes
- Reporting & Statistics
- No need to reinvent the wheel
  - Re-use International Archetypes where possible via federated CKM systems
  - But work on your own timeline
  - With your own organisation(s) and people

CKM rocks is a shared space where different customers can work alongside each other on the same CKM instance, but in different projects and/or subdomains.
This reduces the maintenance overhead significantly and thus enables a low entry point for customers interested in CKM services.

The shared CKM rocks instance:

**1** Branded generically, i.e. not specific to a single customer

**2** One URL, e.g. https://ckm.rocks

**3** A place where customers can rent individual projects or subdomains (which can contain several projects)

**4** Offers direct URLs such as https://ckm.rocks/projects/1013.15.230 for each project and similar for each subdomain

**5** Supports limiting the size of Subdomains and Projects, i.e. the number of resources (archetypes and templates)owned by each project or subdomain can be restricted to a certain number depending on the licencing level of the customer. This is enforced by a new special vendor-admin user role that only Ocean can assign and that can set up the limits for each rented project or subdomain.

## CONCLUSION

CKM and CKM rocks enables the development of clinical models that can fulfil local, regional, and national requirements. These computer processable models allow knowledge reuse as a solid foundation for a "Digital Health Ecosystem". They allow customisations for local use cases, and they can be accumulated in repositories to be used as the basis of future clinical models.

They are available to all smaller enterprises as CKM rocks NOW!

**CKM rocks**
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## ABOUT OCEAN

For over 25 years, Ocean Health Systems has provided a suite of clinical applications for infection control, staff health, shared care records, and care planning to governments, hospitals, and primary care organisations, which were developed using the openEHR repository and clinical information models. These include Clinical Knowledge Manager (CKM) and Multiprac amongst others.

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