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Consulting

Good Vibes Only

A Coding Journey to
OpenStudyBuilder
Extensions



Agenda



- Introduction
 - Vibe Coding: Word Update
 - Vibe Coding: Pre-Define
 - Summary & Think bouts
-



Introduction



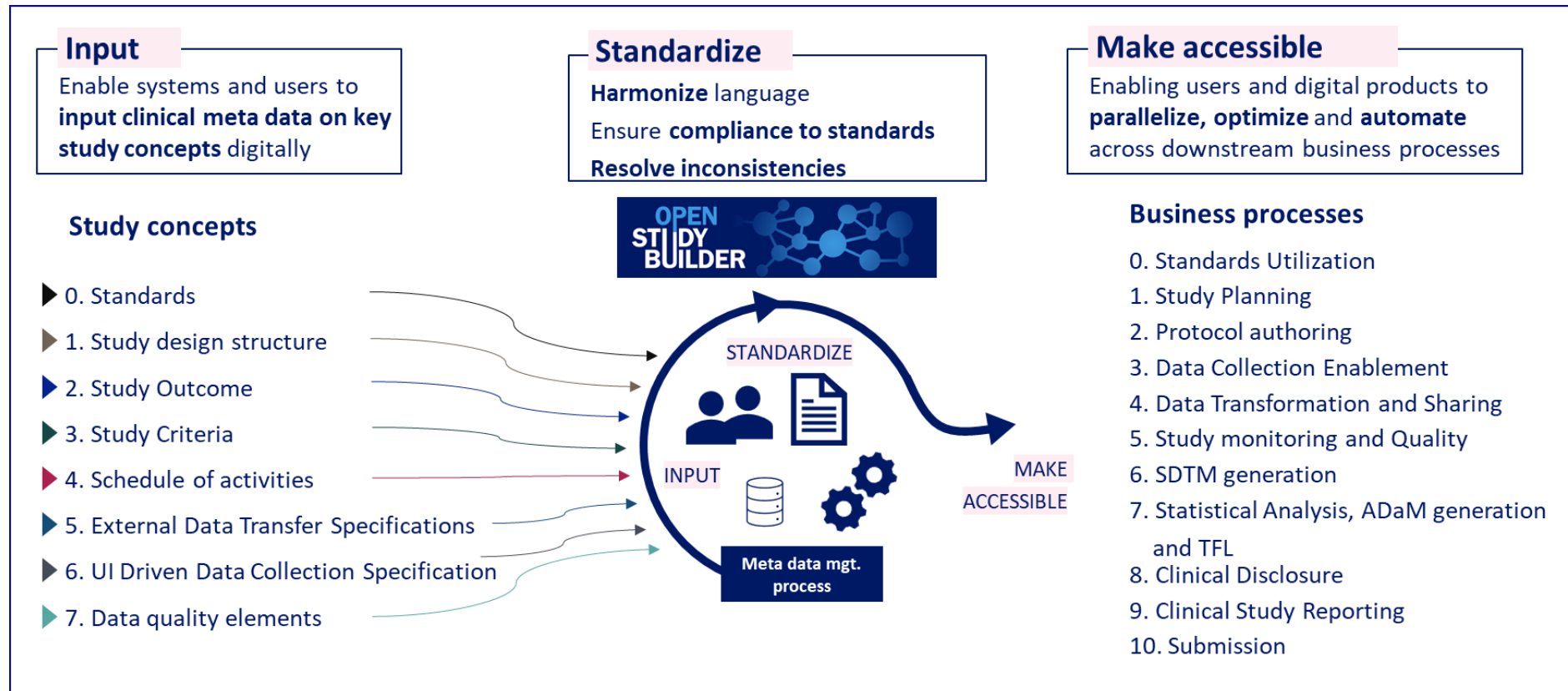
- Fast evolving technology
- Learning by doing
- Something meaningful



Introduction



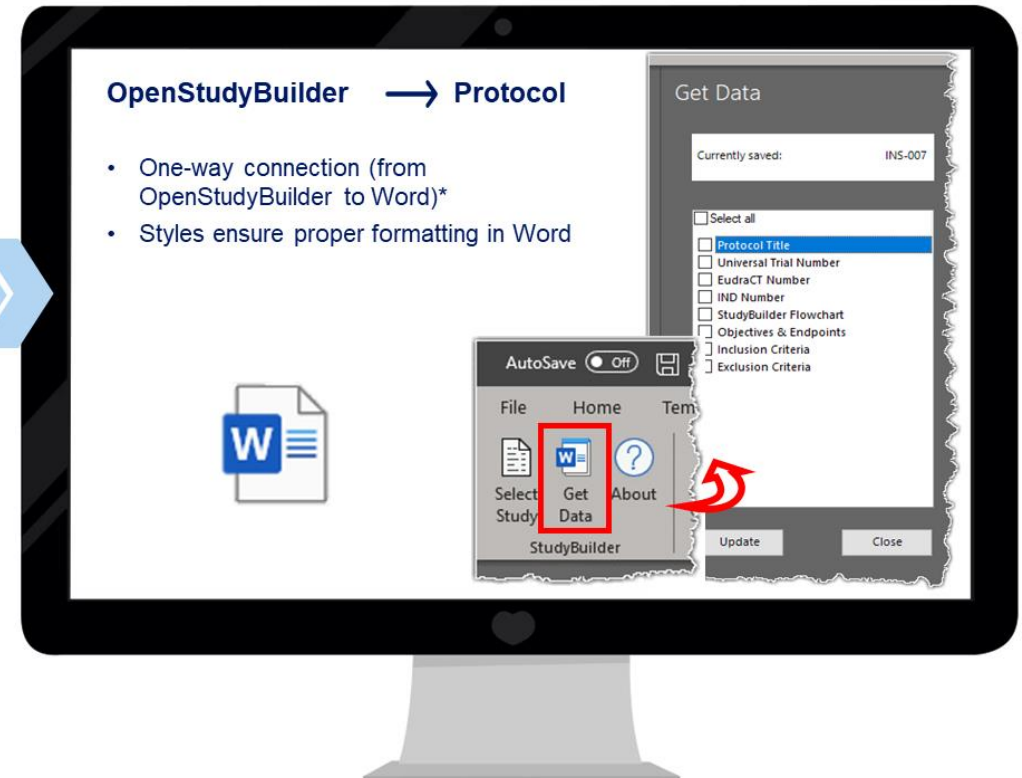
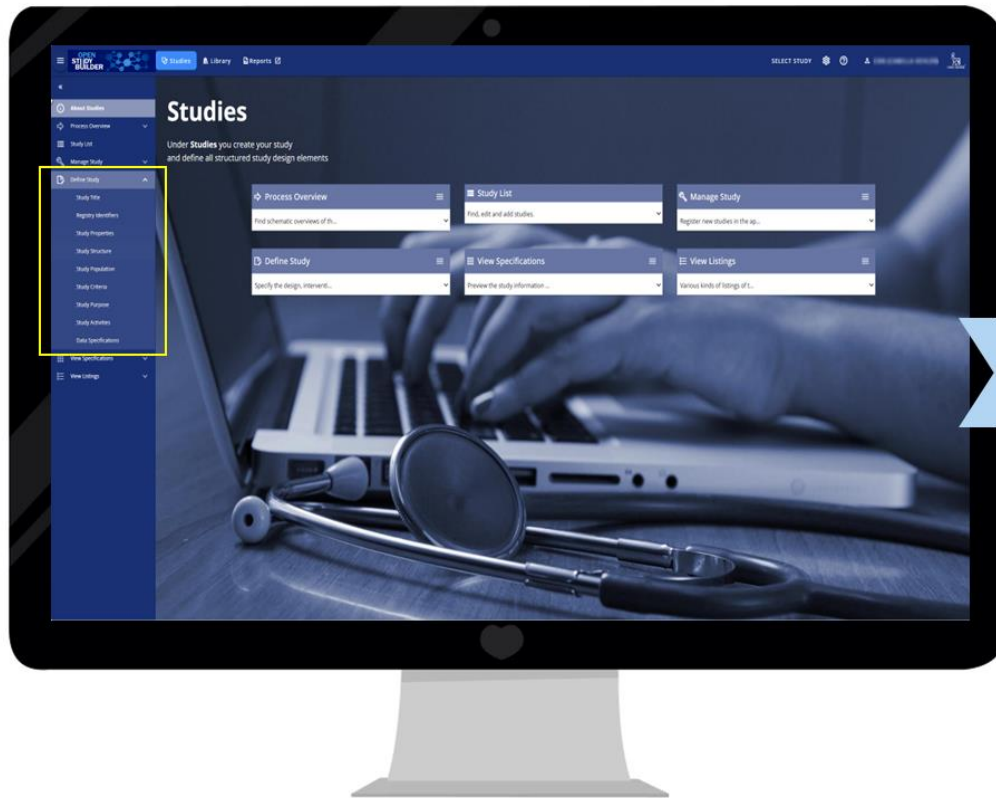
➤ OpenStudyBuilder – open-source MDR & SDR



Introduction



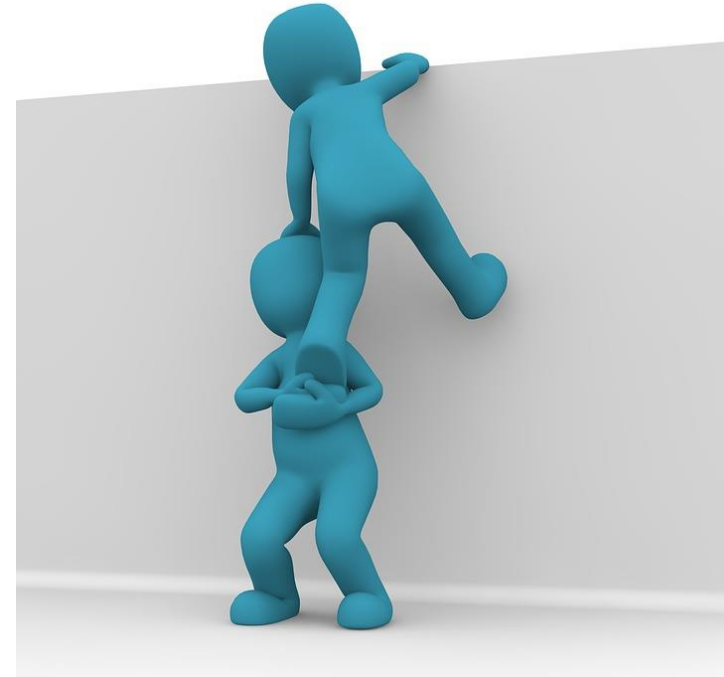
➤ Word-Add-In



Introduction



- Need to have Windows & Microsoft Word
- Installation complexity
 - Admin rights
 - Trust solution
 - Specific EntraID authentication
- Can't it be done with Python?

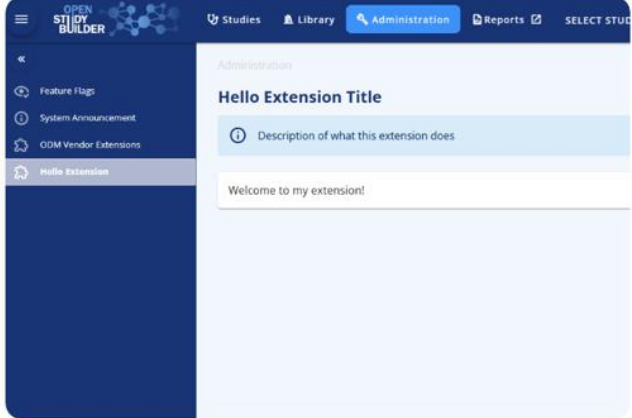


Introduction



- OpenStudyBuilder Extensions since March 2026
 - User Interface & Custom API

**Extensions Framework: UI Capabilities**
Frontend extensions integrate seamlessly into the existing application shell

APPLICATION PREVIEW

↑ Custom menu items injected into sidebar

↑ Custom page rendered inside existing shell

WHAT EXTENSIONS PROVIDE

**Custom Menu Items**
Navigation integrated into any section Enabled



- Inject items into Studies, Library or Administration
- Respects **role-based permissions** and feature flags
- Automatically discovered and loaded at runtime

**Custom Features**
Full Vue.js components and API endpoints Enabled



- Reuse all existing **UI components** and design patterns
- Own **API endpoints** with shared auth infrastructure
- Isolated modules — **no changes** to the core codebase

 **Proof of concept:** Interfaces are not yet frozen. Component versioning is not planned for the near term — maintenance implications apply.

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Vibe Coding: Word Update



- Can this be done with Python?
- “Claude” communication
 - Read in the Word-Extension ([GitHub](#))
 - Read in OpenStudyBuilder API
 - Create python script



Vibe Coding: Word Update



- 30' first PoC – stand alone functionality
- 2h with finetuning & documentation



Parameter	Required	Default	Description
--study	Yes	—	Study UID to fetch (e.g. Study_000001)
--template	Yes	—	Path to the input .docx template (must exist)
--out	Yes	—	Path to write the updated document
--version	No	LATEST	Study version number (e.g. 1.0.0)
--api	No	from config	Override the API base URL
--config	No	auto	Path to config.yaml (see README)
--tag	No	all tags	Limit the update to specific tags
--app-version	No	—	Print the tool version and exit
--help	No	—	Show usage help and exit

```
# Update all fields, latest version, no auth
elobs-word-updater \
  --study Study_000001 \
  --template .\core\templates\ProtocolTemplate_OSB_1.1.docx \
  --out my_protocol_output.docx \
  --api http://localhost:5005/api

# Specific version
elobs-word-updater \
  --study Study_000001 \
  --version 1 \
  --template .\core\templates\ProtocolTemplate_OSB_1.1.docx \
  --out output.docx
```

Vibe Coding: Word Update



- Make it an extension
 - Read in extension creation description
 - Consider “Hello” example extension
- Setup & testing (knowledge helps)
 - How to setup & test locally (API / UI)
 - How to setup & test in Docker
 - API has testing script
 - UI using manual (human) testing



Vibe Coding: Word Update



➤ Solution

The screenshot displays the OpenStudyBuilder web application interface. The top navigation bar includes links for Studies, Library, Administration, Reports, and a user profile (ANONYMOUS). The left sidebar lists various study management options. The main content area shows a Word document template titled "CLINICAL ELECTRONIC STRUCTURED HARMONISED PROTOCOL (CESHARP)". The document contains a table with fields for protocol details, each with a placeholder for data from the StudyBuilder ribbon.

Protocol Full Title:	Protocol Title <i>[Insert via the StudyBuilder ribbon.]</i>
Sponsor Confidentiality Statement:	
Protocol Number:	Study ID <i>[Insert via the StudyBuilder ribbon.]</i>
Version:	
Amendment Number:	
Amendment Scope:	
Compound Number(s):	
Compound Name(s):	
Trial Phase:	Study Phase <i>[Insert via the StudyBuilder ribbon.]</i>

The bottom status bar indicates the document is on page 1 of 23, contains 1717 words, and is in English (United Kingdom).

Vibe Coding: Word Update



➤ Summary

- Took together 2,5 days – much went into setup local and adopt
- Major changes from API to “inbuild” features
- Change from no authentication – to authentication – to inbuild no authentication
- Things that worked, didn't work after an update (even though tests are created and run along)
- Time consuming part is the human



Vibe Coding: Word Update



- Questions
 - How long to vibe next project?
 - Lessons learned & setup for next!



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Vibe Coding: Pre-Define



- Existing Neo4j dashboard
- Display in OpenStudyBuilder

neo4j://localhost:5002

Pre-Define

Pre-Define.xml

Warning: NeoDash is running with a plaintext password in config.json.

Study Selection

Select	StudyID	Study...	StudyAcronym	StudySubpart
SELECT	0	CDISC DEV		No sub study
SELECT	0001	CDISC DEV	DDF-SampleData-0001	No sub study
SELECT	3000	999	DummyStudy 0	No sub study
SELECT	3001	999	DummyStudy 1	No sub study
SELECT	3002	999	DummyStudy 2	No sub study

Rows per page: 5 1-5 of 15

Study

label	Value
Study Name	CDISC DEV
Study Description	Title for this Study
Study Description	Title for this Study (new)
Protocol Name	

Rows per page: 5 1-4 of 4

Standard selection

Select	SponsorModelIlg	Cdisc...	EffectiveDate	Version
SELECT	sdtmig_mastermodelL3_2_NN15	SDTM IG v3.2	2013-11-26	3.2
SELECT	sdtmig_mastermodelL3_3_NN01	SDTM IG v3.3	2018-11-20	3.3
SELECT	sdtmig_mastermodelL3_3_NN02	SDTM IG v3.3	2018-11-20	3.3
SELECT	sdtmig_mastermodelL3_3_NN03	SDTM IG v3.3	2018-11-20	3.3

Rows per page: 5 1-4 of 4

Datasets - Using sdtmig_mastermodelL3.2_NN15

```
1 Query returned no data.
2
3
4
5
6
7
```

Vibe Coding: Pre-Define



- Create the structure first
 - Files required
 - GUI text
 - API call



For the first implementation – create a dummy endpoint returning “hallo world” and the UI containing in the content the dummy endpoint return.

I want to create an OpenStudyBuilder extension - like the one here: ...\\git\\elobs-word-updater - this time I want to create a pre-define viewer - I do not need a "core" python package - I only want to create API endpoints and a user interface. analyze the structure from elobs-word-updated and propose an according structure

For the first implementation – create a dummy endpoint returning “hallo world” and the UI containing in the content the dummy endpoint return.

Testing

Fix it

Working

Vibe Coding: Pre-Define



- Describe actual Content
 - Read dashboard, create corresponding GUI



did you also consider existing API endpoints? `C:\git\OpenStudyBuilder-collab\clinical-mdr-api\openapi.json`

Actually, I want an inbuild user interface for the NeoDash report which is available in the OpenStudyBuilder app - analyze this NeoDash: `... \git\OpenStudyBuilder-collab\neo4j-mdr-db\neodash\neodash_reports\pre_define.json` - I want a study-selection, the display of study metadata (name, descriptions, additional version), selection of a standard, selection of "datasets" which are domains and then display them in a table - the "Codelist/Terms" are not of relevance and can be ignored.

Use the hybrid (reuse endpoints for 1,2,3 and cypher 4,5) - but not need to make direct API calls as the extension is running within the system similar to how the elobs-word-updater reads in study number for example

Start Finetuning

the first three panels are fine - I just realized that the cypher query is invalid - use the following:

```
// Study selection with applicable Visits and Study Activities and Grouping New Version MATCH()-[r1:LATEST]->(n2:StudyValue {study_number: "0"})-[r2:HAS_STUDY_VISIT]->(n3:StudyVisit)-...
```

Working

Vibe Coding: Pre-Define



- Fully working after 2,5h ... (little to update to 2.10)

The screenshot shows the OpenStudyBuilder web application. The top navigation bar includes links for Studies, Library, Administration, and Reports, along with a CDISC DEV-0 badge and a user profile labeled ANONYMOUS. The left sidebar contains a menu with options like About Studies, Study List, Manage Study, Define Study, View Specifications, View Listings, ELOBS Pre-Define Viewer (selected), and ELOBS Word Updater. The main content area is titled 'ELOBS Pre-Define Viewer' and includes an information box stating: 'Extension: View a study's Pre-Define (define.xml style) datasets and variables from OpenStudyBuilder.' Below this are two dropdown menus: 'Study' and 'Version' (set to Latest). A third dropdown menu shows 'Standard (sponsor model)'. The 'Datasets' section contains a table with columns: Dataset, Description, Class, Structure, Purpose, Keys, Documentation, and Location. The table is currently empty, displaying 'No data.' at the bottom. Pagination controls show 'Items per page: 10' and '0-0 of 0'.

OPEN STUDY BUILDER

Studies Library Administration Reports

CDISC DEV-0

ANONYMOUS

novonordisk

«

About Studies

Study List

Manage Study

Define Study

View Specifications

View Listings

ELOBS Pre-Define Viewer

ELOBS Word Updater

Studies

ELOBS Pre-Define Viewer

Extension: View a study's Pre-Define (define.xml style) datasets and variables from OpenStudyBuilder.

Study

Version Latest

Standard (sponsor model)

Datasets

Select a study and a standard to list datasets. Click a row to view its variables.

Dataset	Description	Class	Structure	Purpose	Keys	Documentation	Location
No data.							

Items per page: 10 0-0 of 0

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Summary and Think bouts



- Vibe coding is amazing
 - Proof of Concept in hours
 - “Learn/Reuse” existing code, APIs and documentation
 - Natural-language enables flexibility on languages (e.g. Cypher)
 - Ideas tested before full implementation
 - Small extensions for specific user needs



Summary and Think bouts



- Human guidance
 - Background knowledge is essential
 - Software design
 - Requirements and context
 - Testing and review
 - Refinement
 - Human remains responsible for quality, security and maintainability



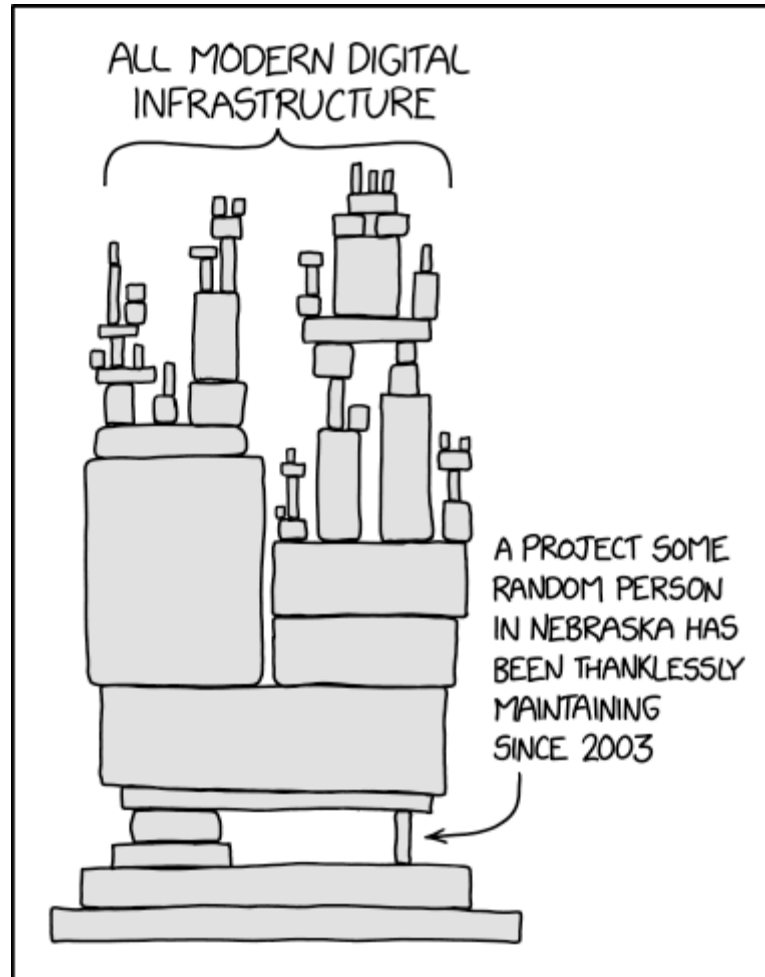
Summary and Think bouts



- Chaos is around the corner
 - Different UI designs and utilizations
 - Duplications & variations
 - Uneven testing, documentation and code quality
 - Unclear ownership and maintenance
 - Technical debt



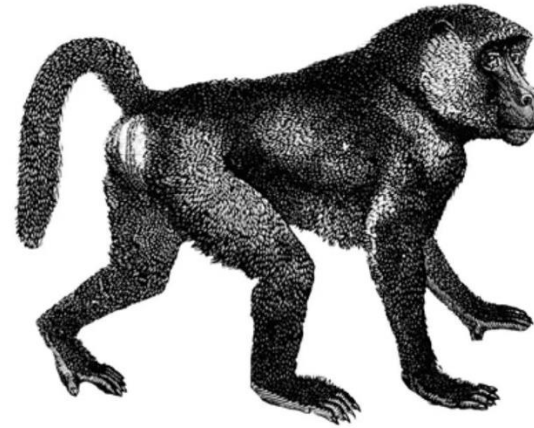
Summary and Think bouts



Summary and Think bouts



Vibe Code Not Working? Never Lose Hope!



Hope Driven Development

a guide to burn tokens

O RLY?

@Audrey HopeBurn

Posted in r/SaaS



Summary and Think bouts



Solve the challenges together!!!



Links



Word Extension:

- <https://github.com/KatjaGlassConsulting/elobs-word-updater>

Pre-Define Extension:

- <https://github.com/KatjaGlassConsulting/elobs-pre-define-display>



<https://openstudybuilder.com>

Questions?



Comments & Questions!

OpenStudyBuilder.com

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