

# Cristal

*One Wiki UI to rule them All*

*L. Dubost & M. Leduc, XWiki SAS*

# Agenda

- Cristal Team
- Product vision
- Design Proposal
- Technical Architecture
- Current Status & Roadmap



**Who we are ?**

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# Cristal Team



Ludovic Dubost, CEO, Founder of XWiki



Manuel Leduc, Tech Lead Cristal



Vincent Massol, CTO



Thiago, UX Designer

With the support of the rest of the XWiki Development Team.

# XWiki SAS

- French & European independent company, est. 2004
- Self-funded, ~4M€ revenue in 2023
- 50%+ growth in 2023
- 60 employees in Paris and Iasi (Romania)
- Two Open Source softwares : XWiki (LGPL) & CryptPad (AGPL) with an international community, 100% Open Source
- Engaged for digital sovereignty in EU
- Services : Support, Training, Consulting, Hosting in the EU



# Product Vision

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# Technological Shifts

- Javascript getting more and more mature
- Better Frameworks
- Standards have evolved (Web Components, JSON-LD, Solid)
- New paradigms: realtime, offline
- Convergence in the field of Wikis (also Doc Mngt, Collaborative Work)

# A more modular future

*“Building on layers is going to be an approach that matters ..  
it enables tremendous innovation”*

— Jitsi Founder Emil, FOSDEM 2022

- Integrations between different Open Source software are key (openDesk)
- Possibility to integrate Wiki UIs in other tools

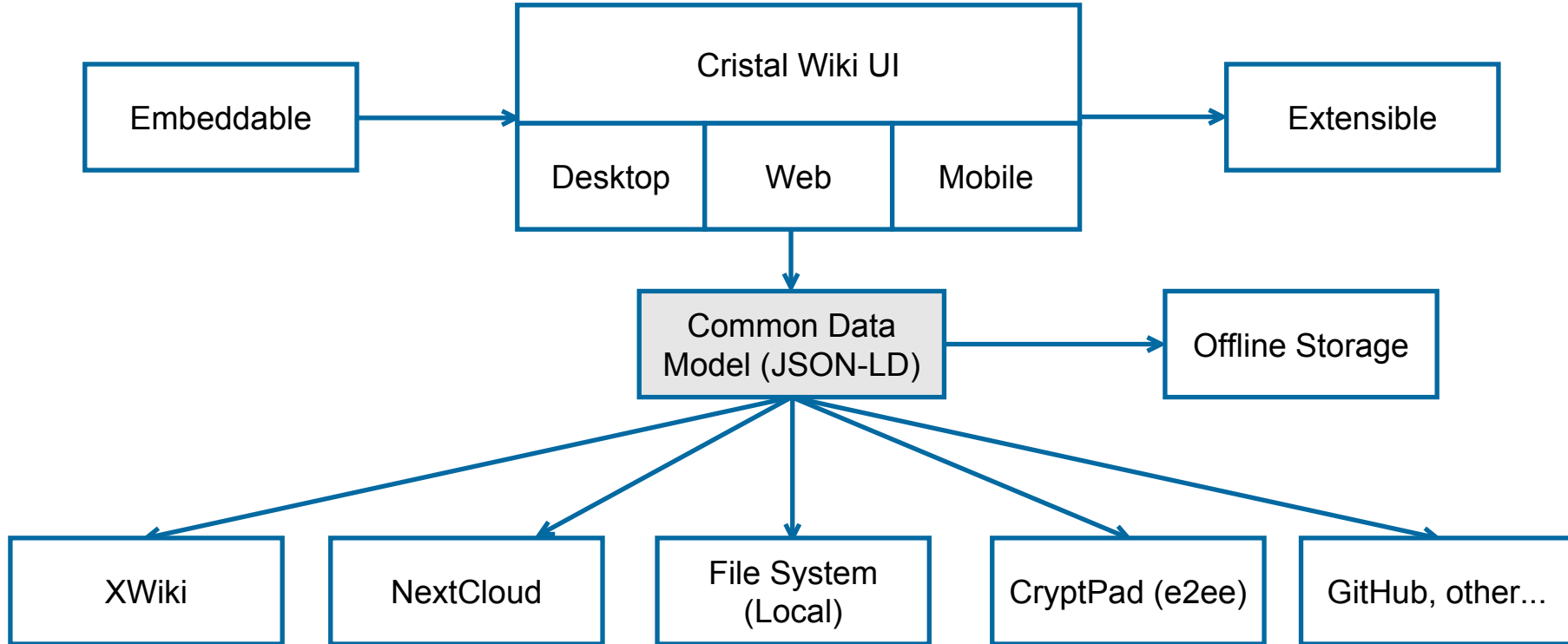


# A opportunity to fund that work

- A French call for “Cloud Collaborative Suites” allowed us to propose this work for funding
- We won as part of 2 consortiums supporting the Cristal Work
- Including Collaboration for the Partners to include Cristal



# One UI supporting multiple backends



# Some key concepts



- Slick UI with modern editor and / commands
- Multi-backends including Local
- Offline and Realtime
- WCAG by default, Web Components, Sustainability
- Available as Web, Desktop (and later mobile)
- Extensible and Configurable Application
- Strong Editor:
  - State of the Art Wiki page (markdown+): Prose Mirror, Milkdown, TipTap
  - Advanced integration (using / commands)
  - Structured data/Semantic Wiki (XWiki / Notion)

# Use cases

- Desktop or Web tool
  - Your wiki UI for markdown files in NextCloud, GitHub or Git
  - Your local note taking app
- Modernization of XWiki (new UI)
- Embeddable as Web Components
- Or even your Wiki view on all your Wikis
- A e2ee Wiki for CryptPad

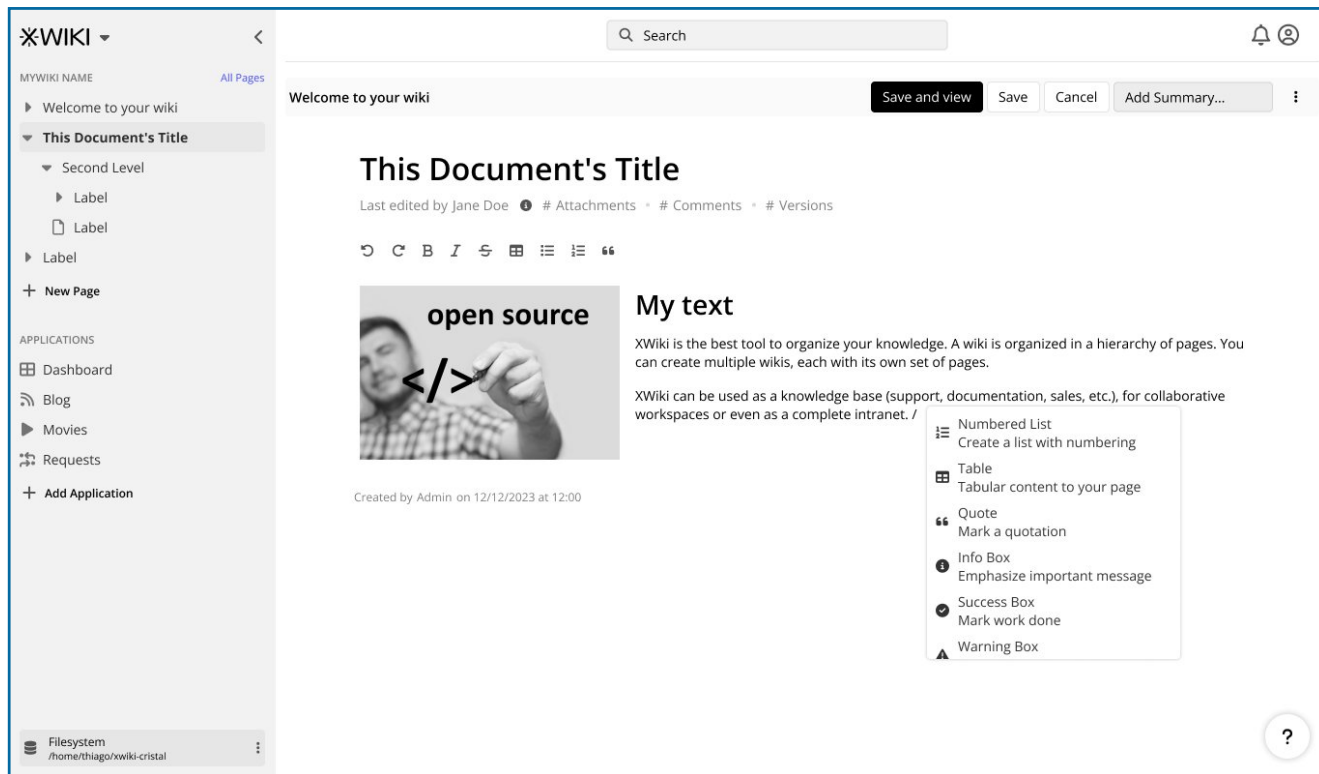
**A new Wiki UI to rule them All**

A blurred office scene with a man presenting to a group of people. The man is standing in the center, facing a group of people seated around a table. There is a whiteboard behind him. The entire image has a blue overlay.

# Design Proposal

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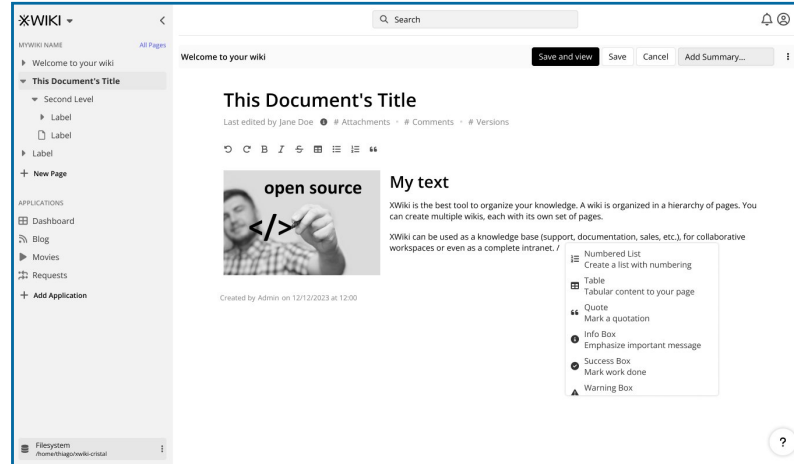
# Wireframes



# Abstract Design System

- Switch Design System by configuration
- No custom code
- We did some perf tests: Shoelace is the fastest

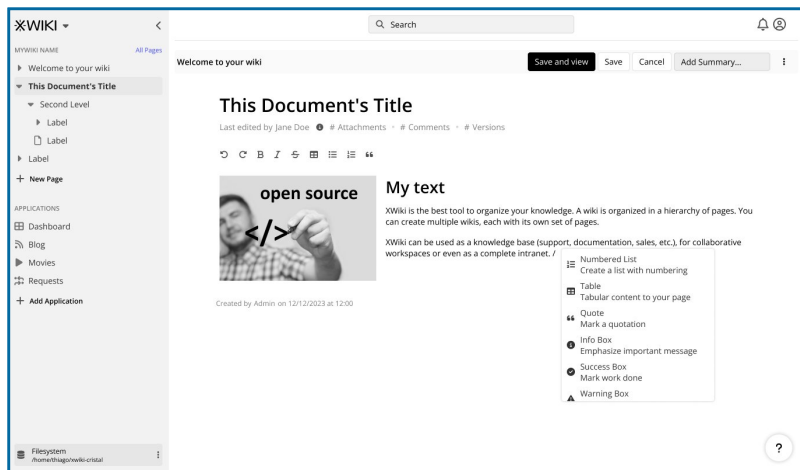
## Abstract



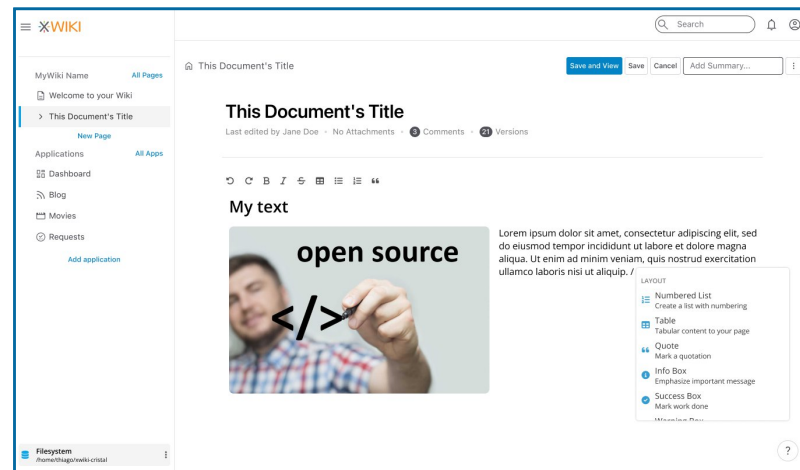


# Abstract Design System

## Abstract

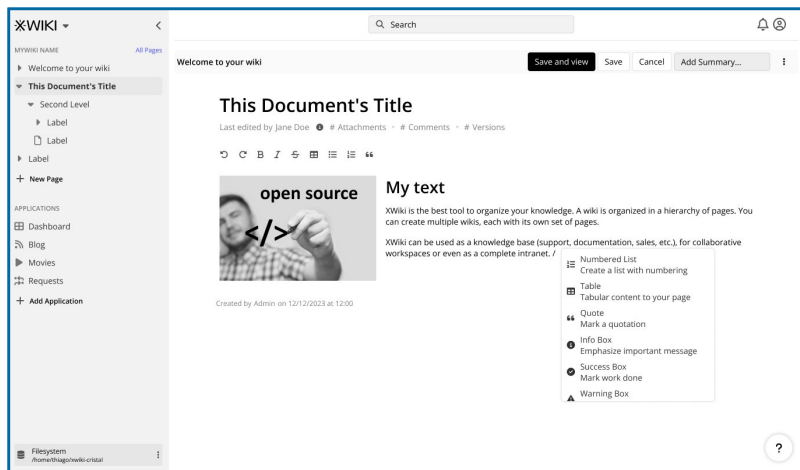


## Shoelace

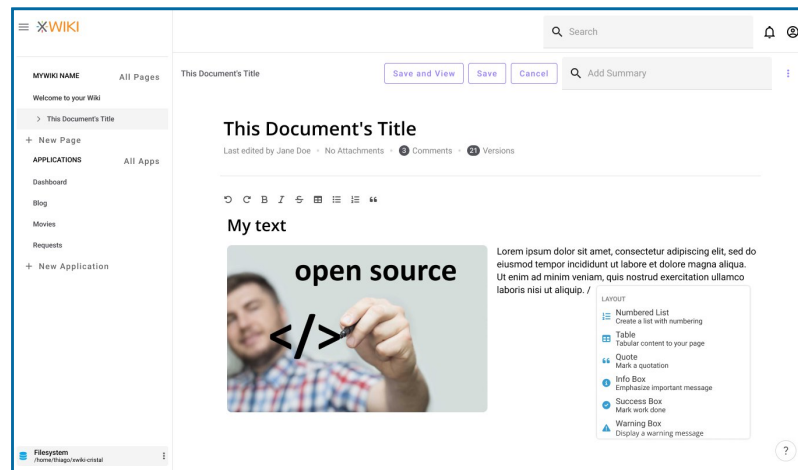


# Abstract Design System

## Abstract

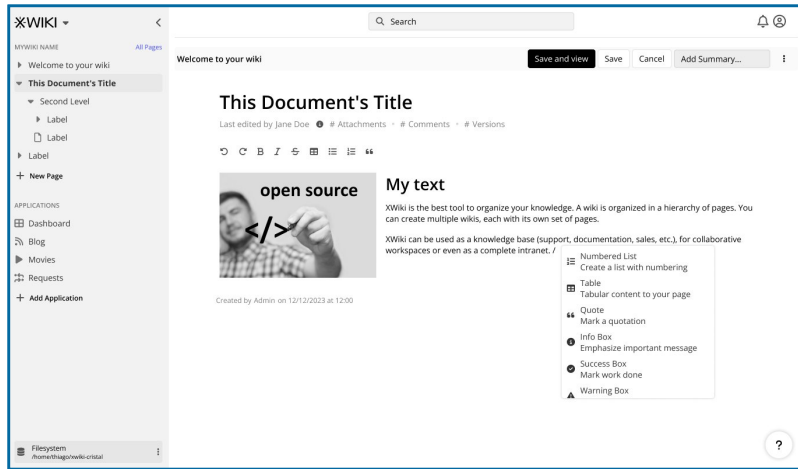


## Vuetify

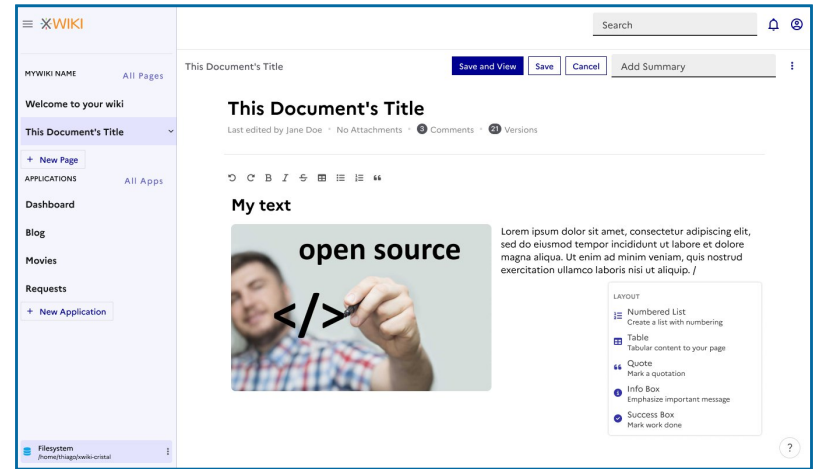


# Abstract Design System

## Abstract



## DSFR



But also, NextCloud theme, etc.



# A Technical View

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# Technological Stack



**Axe-Core**

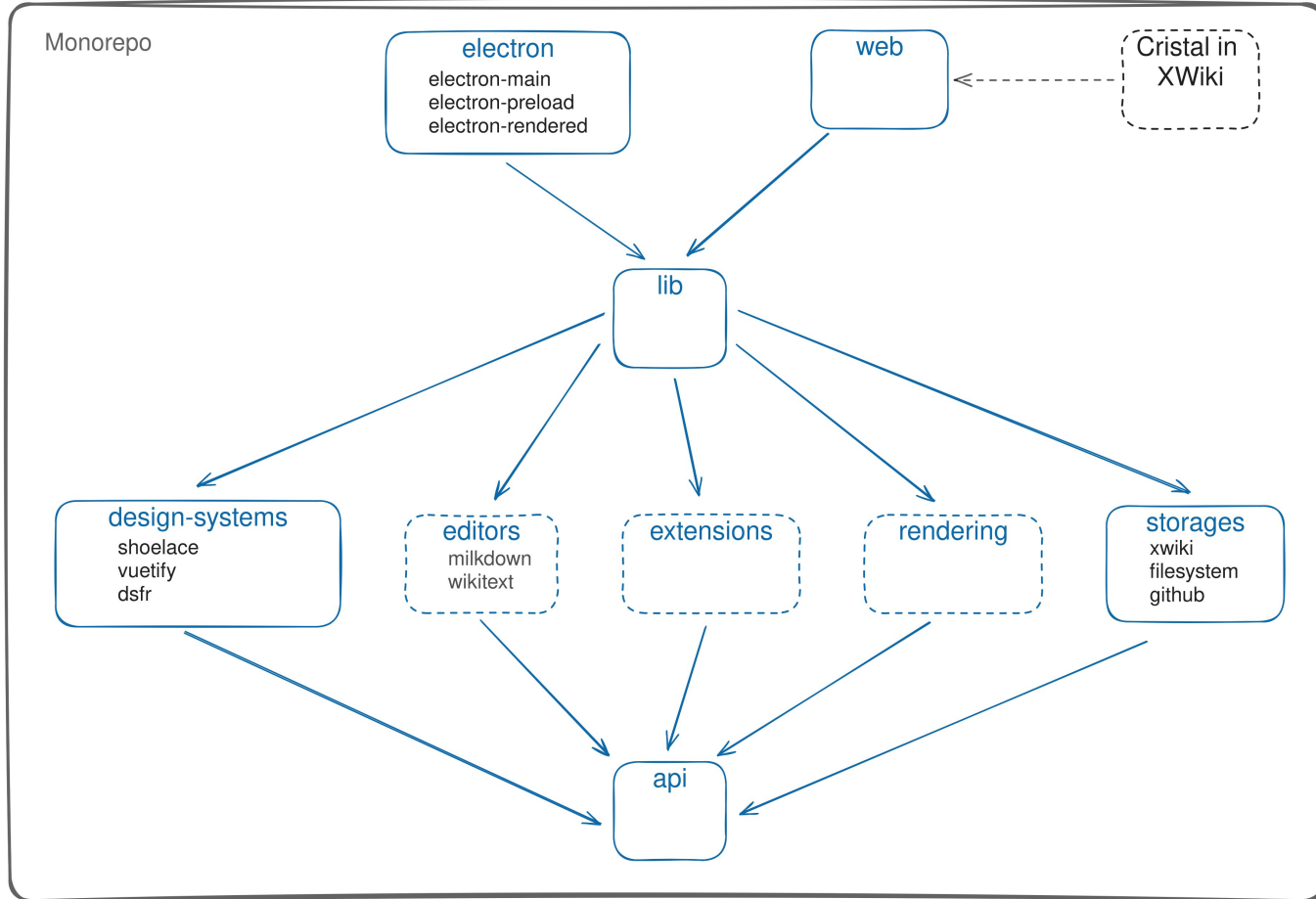


*Shoelace*



<https://cristal.xwiki.org/xwiki/bin/view/Main/TechnologicalChoices/>

# Modules



# Key Aspects

A lot of crosscutting aspects to consider, test and document:

- Accessibility
- Artifacts size
- Performance
- Localization
- Inversion of Control
- Standard based (JSON-LD, Web Components...)
- Documentation

# Artifacts we will deliver

## Developers

- Abstract Design System library (Web Components)
- A set of connectors
- Javascript Wiki Syntax renderer
- Cristal Extension SDK
- Cristal Embedding SDK (Web Components/Vue.js)

## End Users

- XWiki Front-end Replacement
- Electron standalone editor



The background is a blurred photograph of a meeting or presentation. A man in a light-colored shirt stands in the center, facing a group of people seated around a table. There are laptops open on the table, and a whiteboard is visible in the background. The entire image is overlaid with a semi-transparent blue gradient.

# Status and Roadmap

# Status

- Prototype of Extensible Architecture using IoC
  - Architecture of Plugins, Skin & User Interface Extension
- XWiki and Markdown renderers, Client Macro renderers architecture
- Choice of Design System Libraries (Shoelace, Vuetify, DSFR)
- Design work
- Prototype of UI for basic View with GitHub and XWiki backends
- First tests for Editor UIs: Milkdown, TipTap
- Project Infrastructure (build, tests, etc..)

# Roadmap

- 2024 : Basic Wiki with key backends
  - Release for NextCloud/GitHub version/Local
  - 50% of XWiki Features available
- 2025 :
  - 75% of XWiki Features available (incl. structured data)
  - Bundled in XWiki
- 2026 :
  - Plugin repository for live extensions
  - Plugin development
  - CryptPad Release

# Thanks!

Party Tonight!! =>



<https://cristal.xwiki.org/>

- Extensible
- Embeddable
- Customizable



<https://fosstodon.org/@xwikiorg/>

We hire! <https://xwiki.com/en/company/jobs/>