VCH overview

Project Overview

Current Workstreams and Collaborations

Agenda

1. VCH Infrastructure (LLM for Students)
2. VCH Infrastructure (General Tooling)
3. VCH Infrastructure (Reproducible Research)
4. Practical AI Use Cases & Workshops
5. AI-Supported Student Projects
6. SupplyLens (formerly Knopenkoning)
7. Experimental Tool Testing (AI Scientist, Far.AI)
8. ClearRoots (SCF NICE Project)
9. ClearPaper (SCF NICE Proposal)
10. Key Collaborations

1. VCH Infrastructure – LLM for Students

Goal: Enable students to use local LLMs for assignments, feedback, and learning.

Why: A local LLM stack lets students perform advanced supply chain research securely and independently, using real data without relying on external cloud services.

Accomplished: - Fully running OpenWebUI-based LLM environment
- Hosted on our own local-controlled server
- Integrated tools: Qdrant, n8n, pgvector, dashboards

Now Possible: We can create automated flows with memory.

Next Steps: - Broader student adoption
- Classroom integration
- Develop real use cases

Help Needed: - Budget for TOKENS so we can run large models
- Current costs are being covered personally
- Time allocation is needed to maintain and grow the stack
- Confirmation that this is a supported, strategic direction

This project lays the technical foundation for responsible student-AI interaction. It reduces reliance on cloud services and enables advanced, privacy-safe research workflows. With a small investment, we can turn this into a standard part of classroom education.

2. VCH Infrastructure – General Tools

Goal: Provide infrastructure with built-in tools so students can quickly ideate and prototype.

Why: A seamless environment helps students move from ideas to experiments without technical barriers.

Accomplished: - AI stack fully deployed
- Nextcloud environment live
- DAT Linux system in full testing

Next Steps: - Integrate AI tools more tightly with the DAT Linux OS
- Enable AI-enhanced features inside Nextcloud
- Launch a Nextcloud-based documentation server

Help Needed: - Hands-on testing of all tools and automations
- Feedback on what's missing or broken
- I need *hours* to improve reliability
- I need support to validate that this infrastructure path makes sense

> This setup is about lowering the threshold for student experimentation. We now have a local cloud, open AI tools, and a Linux-based desktop system under one roof. With testing and refinement, this becomes a plug-and-play environment for future student-driven supply chain solutions.

3. VCH Infrastructure – Reproducible Research (incl. DAT Linux)

Goal: Enable researchers to build, test, and share repeatable experiments — including data, code, and results.

Why: This supports frictionless academic collaboration:
- Reproduce prior research
- Run simulations
- Build openly on each other's work

AI has narrow, specific uses in research — but reproducibility unlocks real value.

Accomplished: - Full stack is deployable using DAT Linux, Docker, and systemd
- RStudio Server tested and running

Next Steps: - Develop integrated research workflows in RStudio
- Study and apply data stewardship best practices

Help Needed: - I need a real past research project to rebuild as a reproducible R workflow
- I need *hours* to prototype and document it properly
- I need confirmation that this direction aligns with our goals

> This is about making research replicable, auditable, and extensible. With this setup, students and researchers can package their work in a form that others can immediately reuse or rerun. It's a key step toward making our lab academically credible

and open-source ready.

4. Practical AI Use Cases & Workshops

Goal: Teach students how to use AI tools effectively, with a focus on real-world limitations.

Why:

AI is massively overhyped. In reality: - It makes frequent mistakes

- Lacks reasoning and context awareness

- Struggles with memory, coherence, and truthfulness

Students must understand how to test, verify, and contain AI — not blindly trust it.

Accomplished: - Workshop repository created

- First sessions completed

- Practical failures (e.g. Knopenkoning, Inchainge) revealed major AI limitations

Next Steps: - Translate IBM-based workshop into applied, real-world format

- Teach data translation: from models to operational reality

- Embed these lessons into ongoing workshop series

Help Needed: - Manpower: integration engineers, network engineers, workshop co-builders

- Testers to challenge tools and give feedback

- Regular, scheduled workshops and hands-on AI meetups

This project is about critical thinking. We're not selling AI — we're building fluency in when and how to use it. These workshops teach students to confront the gap between theoretical AI performance and actual system behavior. That's where deep learning happens — and where trust is earned.

5. AI-Supported Student Projects

Goal: Support student-led projects by giving them access to AI tools that just work — instead of expecting them to build or understand AI infrastructure from scratch.

Why:
As Maxime correctly pointed out, most students are not equipped to build models or flows.
Chris worked with “What he had and what he was working with”, but that doesnt work; Instead, we: - Provide working - End-user faceing tools; not chatbots. - Focus on prompting, saving, processing
- Teach integration with commercial and internal systems
This approach boosts their real output — it’s more valuable than sandbox experiments.

Accomplished: - Built 2 fully working websites and concepts using AI
- Far beyond what students could build on their own
- Proved that AI mentorship unlocks creativity and output

Next Steps: - Showcase project results
- Formalize AI mentorship offerings
- Identify new student use cases

Help Needed: - **Stop** restricting expert-student interactions — students need direct support to accelerate
- **Start** giving token budgets so we can run large models when needed
- **Stop** comparing local setups to billion-dollar AI clouds

- **Start** allowing external experts to connect with our lab (e.g. via Discord or open sessions)
- **Start** recognizing Value Chain Hackers as a serious initiative: give it a KvK, a domain, and a mandate
- **Start** giving Chris a dedicated team of IT and business students to build applied AI solutions

This slide is a call to shift from theory to empowerment. Students thrive when given working tools and mentorship. The current model is burning energy on trying to teach what can't be learned in a crash course. Instead, let's supercharge them — and learn from what breaks.

6. SupplyLens (formerly Knopenkoning)

Goal: Visualize complex supply chains using a combination of AI, ESG data, and graph technology.

Why:

- Supports CSRD/CSDDD compliance
- Enables risk mapping, transparency, and actionable insights
- Real use for real complexity

Why Now:

- Lessons learned from previous attempt (Sebastien encounter)
- Renewed clarity, realism, and enthusiasm
- Ongoing interest from the AI community to contribute
- Chris has developed a new, feasible approach

Accomplished: - New direction and architecture defined

- GitHub + live demo prepared: - GitHub
- Demo

Next Steps: - Greenlight to begin ideation

- Allocation of focused working hours
- Approval to form a dedicated Scrum team

Help Needed: - Permission to proceed and bring in trusted external contributors (free) - Split this off from Value Chain Hackers as

it’s own initiative, with a kvk, domain etc. - Minimal prototype budget (< €5K) for infrastructure and testing
- Space to experiment and iterate with a core team, allow chris to work with externals.

SupplyLens brings together sustainability, transparency, and AI to address a real need: supply chain visibility. After a difficult first iteration, this new approach is grounded, collaborative, and well-scoped. With a small budget and a bit of trust, we can show fast progress.

7. Experimental Tool Testing – AI Scientist, Far.AI

Goal: Explore emerging AI tools that support scientific workflows — from multi-step reasoning to automated experimentation.

Why:

- Keep Windesheim connected to the frontier of AI development
- Investigate tools that can:
- Automate cyber attack simulation
- Assist in generating PhD-level research
- Handle complex multi-step processing

These tools could reshape the way academic research is conducted.

Accomplished: - Reviewed AI Scientist and Far.AI projects

- Identified promising capabilities and applications
- Repository bookmarked:
- GitHub – AI Scientist (aci)

Next Steps: - Actively test 3 tools to evaluate research potential

- Identify barriers and integration opportunities

Help Needed: - Token budget required to run and evaluate these tools properly

This initiative keeps us ahead of the curve in research tech. While not production-ready, these experimental tools offer a glimpse into how AI might eventually support fully automated or guided scientific inquiry. We should test now — and decide where to engage deeper.

8. Project Proposal – ClearRoots

Goal: Build a digital platform to help smallholder cooperatives and EU SME importers comply with EU sustainability laws (CSRD, CSDDD, EUDR).

How It Works: - Cooperatives enter data via a multilingual, offline-capable mobile app
- Data is time-stamped and stored on AgUnity's blockchain for traceability
- System guides users through EU-aligned documentation workflows
- Importers receive ready-to-submit compliance dossiers for each shipment

Why It Matters: - EU rules now require sustainability documentation that smallholders can't easily produce
- Importers lack practical tools to meet compliance requirements
- This platform enables both sides to comply — without exclusion or greenwashing

Current Status: - Drafted core logic, roles, and compliance flow
- Identified pilot framework and documentation logic
- Initial partners: AgUnity, Windesheim, SCF NICE
- First pitch deck and 1-pager created

Help Needed: - Funding or co-development support to move into implementation
- Support turning this into a grant proposal
- A grant writer or strategic partner to help secure next steps

ClearRoots bridges regulatory pressure with practical tech. It empowers both sides of the supply chain with credible documentation — not token checklists. We're ready to move, and we're aligned with real partners. What we need now is momentum and backing.

9. Project Proposal – ClearPaper

Goal: Create practical, standardized templates to help cooperatives, importers, and other actors comply with EU sustainability laws (CSRD, CSDDD, EUDR).

How It Works: Each template would: - Be directly linked to specific EU legal clauses
- Come in Word, LaTeX, and JSON formats
- Adapt to national implementations and local languages
- Optionally integrate with tools like AgUnity for semi-automated input

Why It Matters: - There's no common definition of what "compliant documentation" looks like
- This creates risk for importers and barriers for smallholders
- ClearPaper provides a transparent, usable foundation for scalable compliance

Current Status: - Begun legal mapping and validation discussions with Windesheim and SCF NICE

Help Needed: - Collect feedback to shape a strong grant proposal
- Turn this into a fundable project — give us a grant writer!

> ClearPaper translates EU regulation into usable formats. It reduces ambiguity and levels the playing field. Without shared templates, even honest actors are at risk of non-compliance. This project builds trust into the documentation process.

10. Key Collaborations

- Thomas Dik – AI tooling and cloud architecture
- Ronald de Boer – Business Intelligence, Power BI integration
- Luka Westgeest – SCF, ClearRoots & ClearPaper
- Stefan Barrett (AG-Unity CTO) – Document processing logic
- Iivo Salmi & Raul Raus – Trusted EU infrastructure research - Finland.