

# AI-Native Course Planning: Landscape, Feasibility, and Recommendations

## 1. Competitor and Alternative Landscape

A variety of tools and workarounds already tackle pieces of the course-planning problem, though none dominate the higher-ed instructor market. Key categories include:

- **Specialized Curriculum Mapping Tools:** *CourseTune* (with its individual offering *CoursePlan*) lets instructors visually map learning objectives to modules and assessments, helping spot alignment gaps and “course bloat” <sup>1</sup> <sup>2</sup>. *CoursePlan* (launched in 2020) was designed for single faculty users at ~\$8/month <sup>3</sup>. Its interface uses radial graphs to show how course goals, modules, activities, and assessments align at a glance <sup>1</sup>. *CourseLoop Curriculum Mapper* is another enterprise solution offering “game-changing visualization” of learning outcomes mapped to courses and assessments, with heatmaps to identify overlaps or gaps <sup>4</sup> <sup>5</sup>. These platforms treat course/program design as structured data models and emphasize constructive alignment and accreditation needs. However, they have mainly targeted institutions or teams rather than being adopted en masse by individual professors.
- **Academic LMS Extensions and Assessment Platforms:** Major learning management systems like Canvas and Blackboard include outcome alignment features, but these are largely geared toward institutional assessment tracking rather than agile course design. For instance, Canvas supports defining learning outcomes and tagging assignments, but this is “not something that sells a school on an LMS” and remains an underused feature <sup>6</sup>. Dedicated assessment management systems (Watermark, HelioCampus, etc.) offer curriculum mapping modules to connect course objectives to program outcomes for accreditation <sup>7</sup> <sup>8</sup>. HelioCampus touts the ability to make curriculum maps a “single source of truth” across a campus <sup>9</sup>, but implementing such systems is resource-intensive and often “overwhelming” without significant training and buy-in <sup>10</sup>. These solutions are procured by institutions; an individual instructor cannot easily adopt them independently.
- **General-Purpose Tools Repurposed by Instructors:** In practice, many instructors have jury-rigged solutions using everyday tools. For example, some use relational databases or spreadsheets (e.g. Airtable or Google Sheets) to ensure that every course activity ties back to a learning outcome <sup>11</sup>. One instructor-designed Airtable template mirrored functionality “similar to what Coursetune tries to accomplish” by visualizing and enforcing alignment between course goals, content, and assessments <sup>12</sup>. Knowledge management apps like Notion and Obsidian are also co-opted for course planning: educators create curriculum maps and lesson calendars with Notion templates <sup>13</sup>, or maintain an Obsidian vault linking syllabus, modules, and lecture notes for each course <sup>14</sup> <sup>15</sup>. These approaches treat the course structure as data (via tables, pages, and links) even though they aren’t bespoke course-planning software. They are popular with tech-savvy instructors because they’re flexible and low-cost (often free), albeit entirely manual. Such “shadow systems” live outside the

official LMS – for instance, a professor might use an Excel or Word template provided by a teaching center to map objectives to activities <sup>16</sup>, then copy updates into the LMS by hand each term.

- **Open-Source and Community Projects:** There have been a few attempts to build open solutions for curriculum mapping. Examples include *TODCM* (Template Object Driven Curriculum Mapping) and *CurriculumStart*, open-source projects from the 2010s aimed at providing a web-based curriculum mapping system <sup>17</sup> <sup>18</sup>. In practice, these garnered little adoption (*CurriculumStart*'s repo has only a handful of stars <sup>19</sup>). More pragmatically, some educators have shared scripts on GitHub to manage course content structure. For example, one project provides Python scripts to maintain course content in Markdown and auto-update Canvas LMS pages via API, preventing drift across multiple places where the content lives <sup>20</sup>. This “assemble-your-own” ethos indicates that individual instructors feel the pain of keeping materials in sync and have started automating it with technical workflows, even if no polished, popular open-source platform has emerged yet.
- **AI-Powered Newcomers:** Very recently, AI-driven course authoring tools have entered the scene. *CourseMagic* (by OpenLearning) is one such tool that uses generative AI to help design courses and produce content which can then be exported to LMS formats like SCORM or IMS Common Cartridge <sup>21</sup> <sup>22</sup>. The pitch is that an instructor can “design and develop courses... in minutes” – the AI assists in structuring the course, aligning activities with outcomes, and generating slide text, quiz questions, etc., which the user can then import into Canvas or Moodle <sup>23</sup> <sup>21</sup>. This lowers the effort of initial course mapping and artifact creation. Another example is *Mapademics*, focusing on program-level curriculum mapping with AI: it claims to automatically analyze syllabi and outcomes to identify coverage gaps and suggest optimizations based on real-time skills data <sup>24</sup> <sup>25</sup>. While these AI-native tools align well with the envisioned capabilities (AI-assisted coverage analysis and easy multi-artifact export), they are very new. It remains to be seen if they gain traction among individual faculty. Notably, *CourseMagic*'s strategy to let instructors build content and then *export* a ready-to-go course file for their LMS aligns with an instructor-first adoption model (no institutional integration needed beyond using the standard import function) <sup>22</sup>. This approach directly addresses the integration hurdle by working at the file level rather than requiring LMS admin privileges.

**Bottom Line:** *The competitive landscape spans from heavyweight institutional systems to grassroots DIY solutions.* No single solution has become the go-to for independent higher-ed instructors. Enterprise curriculum management tools prove the concept's value for formal alignment and accreditation, but their complexity and cost impede individual use. Meanwhile, countless instructors resort to general tools (Notion, spreadsheets, personal scripts) to patch together their own “system” for keeping syllabi, outcomes, and materials consistent. The recent AI-based offerings underscore that the problem is recognized and **partially** solved in pieces: we see visual mapping, gap analysis, content generation, and LMS export all being tackled, but not yet in one seamless, widely-adopted package.

## 2. Market and Adoption Analysis

**Who feels this pain?** The problem of “coordination drift” – where a change in one course element requires updates in many others – is most acute for instructors who teach content-rich, technical, or multi-component courses. In fields like computer science, engineering, or data science, a course may involve lectures, labs, assignments, projects, each targeting specific skills, making alignment critical. Similarly, faculty who design courses for accredited programs (e.g. ABET-accredited engineering) feel pressure to map everything to learning outcomes. These educators (often early-career teaching-focused faculty or

instructional designers assisting faculty) are keenly aware of the need for consistency and often actively create course maps <sup>26</sup>. They are the ones using those Excel curriculum matrix templates and internal course maps provided by teaching centers. However, not all instructors perceive the pain equally – many in higher ed (especially in less technical or less outcomes-driven disciplines) operate with looser course plans and may not realize misalignment issues until problems occur. Thus, the “market” skews toward pedagogically-minded faculty, those teaching online or hybrid courses (where design must be explicit), and anyone who has experienced the headache of an objective or exam question that was accidentally orphaned from the rest of the course plan.

**Who is addressing/paying for it now?** Today, *institutions and departments* are the primary “buyers” for formal solutions. Universities invest in curriculum mapping and assessment platforms mostly to satisfy accreditation and to support program-level curriculum reviews <sup>27</sup> <sup>28</sup>. For example, a university might purchase licenses for Coursetune or HelioCampus as part of an initiative to improve program coherence and gather outcomes data for accreditors <sup>29</sup> <sup>30</sup>. In these cases, the end-users (faculty) often access the tool because the institution mandates or encourages it. Adoption at this level can be slow, as it requires cultural change and training – some professors push back against the very idea of granular mapping, feeling it makes teaching too rigid <sup>31</sup>. Meanwhile, *individual instructors rarely spend their own money* on niche planning software. CourseTune’s attempt at a direct-to-faculty product (CoursePlan at \$8/month) indicates a willingness to price for individuals <sup>3</sup>, but there’s little evidence that large numbers of professors swiped their credit cards for it. In practice, solo instructors gravitate to free or existing tools (the path of least resistance). For instance, a K-12 teacher on Reddit noted she loved CommonCurriculum’s planner but “a lot of the features are paid, and I’m a teacher so I can’t afford it,” opting to use the limited free version instead <sup>32</sup> <sup>33</sup>. Likewise, higher-ed instructors use free tiers of Notion, Airtable, or simple Google Docs to do the job, rather than pay for a dedicated system. This suggests *price sensitivity* and a perception that a course planning aid is a “nice-to-have” productivity tool, not something worth significant personal expense. The only exception might be instructors who double as small EdTech entrepreneurs or enthusiasts – they might sponsor open-source efforts or buy a tool if it demonstrably saves them time.

**Instructor-first adoption viability:** Despite these challenges, there is a niche viability for instructor-first adoption if the solution is **lightweight, low-friction, and immediately useful**. The tool must deliver obvious benefits (time saved, errors avoided, insights gained) without requiring institutional integration or approval to get started <sup>34</sup> <sup>35</sup>. Instructors are able to adopt supplemental tools on their own – we see this with widespread use of personal tech like Obsidian vaults or privately-run JupyterHub servers for teaching. The key is that the tool should slot into their workflow rather than demanding a wholesale process change. For example, an AI assistant that lives inside a tool they already use (say, a plugin for their LMS or note-taking app) could have an easier adoption path than a brand new standalone platform. The CourseMagic approach of offering a no-cost, quick-start web app to generate course content and then export into Canvas is one model: it doesn’t ask the instructor to abandon the LMS or get permissions – it just accelerates tasks they were going to do anyway <sup>22</sup>. This kind of semi-automated export (where the instructor manually imports a provided file) avoids any need for IT involvement and respects the “single instructor acting independently” constraint <sup>36</sup>. In short, an individual-focused solution can gain users if it *solves a real pain point with minimal overhead*. The potential user base is small relative to all faculty, but quite passionate – likely the same folks who attend teaching innovation workshops and post in r/InstructionalDesign about improving their courses.

**Barriers to adoption:** Several barriers temper the above optimism:

- *Cultural and Workflow Barriers:* Higher ed instructors highly value autonomy. A system that feels prescriptive (e.g. enforcing a certain design process or terminology) could face resistance <sup>31</sup>. Some faculty simply don't plan in a structured way – their course evolves from semester to semester organically. Convincing them to invest time up front in modeling their course as data is an uphill battle unless required by their institution. Additionally, many instructors already feel overburdened; a tool that isn't extremely intuitive and time-saving will be seen as extra work. Past attempts show that even when institutions buy a tool, getting faculty to populate and maintain a curriculum map is "resource-heavy" and requires training and incentives <sup>10 37</sup>. An independent tool would have to be far simpler to avoid those issues.
- *Financial Barriers:* As noted, individual educators are reluctant to pay out-of-pocket for software that isn't clearly indispensable. The willingness to pay is low, so a commercial product must either offer a compelling free tier or be so cheap and valuable that it overcomes inertia. This severely limits revenue potential per user. On the institutional side, budgets exist for teaching and learning improvement, but breaking in as a new vendor requires proving you solve a problem better than the LMS or existing accreditation tools – not easy if you lack a track record. Thus, from a market perspective, a direct-to-consumer (instructor) product might struggle to monetize at all, and a B2B (institution) product contradicts the "instructor-first, no IT approval" philosophy.
- *Regulatory/Data Barriers:* One bright spot is that a planning tool can avoid handling sensitive student data altogether. If the system focuses on course content and structure (outcomes, topics, assignments, etc.), it can steer clear of FERPA issues. This is good because any whiff of needing to store student performance or personal data would raise red flags and likely kill individual adoption (few professors would be comfortable uploading class lists or gradebooks to an unofficial tool). So, compliance requirements mainly come into play if the tool later tries to incorporate student outcome analytics or pulls roster info via LMS APIs. Unless there's a strong use-case justification, it's wise to avoid those features. That said, even content can raise mild concerns: instructors may worry about intellectual property (syllabus language or original materials) being uploaded to an external AI service. Transparency and local control (or using on-premises open source) could be important for trust. Overall, the regulatory burden can be kept low if the scope stays on planning and mapping (not live student data), which aligns with the user's constraints <sup>38 39</sup>.

In summary, the market reality is *niche and challenging*. The pain is real for a subset of instructors and academic programs, and they currently either soldier through with manual efforts or use piecemeal tools. While those who feel the pain deeply might love a solution, reaching critical mass and revenue is hard. Adoption will likely be grassroots (word-of-mouth among teaching communities or early adopters) rather than institutionally driven at first. Any viable approach must lower cultural and financial barriers – for example, by integrating into existing workflows and offering value for free – to gain a foothold.

### 3. Technical Feasibility Assessment

Despite the market hurdles, building an **AI-native course planning system** is technically feasible. We assess feasibility across data modeling, AI capabilities, integration, and compliance:

- **Data Models and Standards:** A core premise is to treat the course structure as a relational data model <sup>40</sup>. This is very achievable with modern data representation techniques. In practice, a course can be modeled as entities like *Learning Outcomes*, *Skills*, *Modules/Topics*, *Sessions (dates)*, *Assessments*, *Materials*, with relationships linking them (e.g. Outcome X is introduced in Session 1, practiced in Lab 2, and assessed by Assignment 3). This is essentially a graph of connections or a set of linked tables – something well within the capability of a lightweight database or even a structured YAML/JSON file. Indeed, instructors manually approximate this with tables and spreadsheets today <sup>16</sup>. The lack of a universal standard here means a custom schema might be needed; however, some relevant standards exist that could be leveraged. For example, the **IMS Competency and Academic Standards Exchange (CASE)** can format learning outcomes and competencies, and **IMS Common Cartridge** can package course content and structure for LMS import. A solution could internally use its own relational schema but export to these formats for interoperability. Even simple CSV exports (e.g. an outcome-by-session matrix) could be valuable for users who want a snapshot. Because the domain (a single course or a set of courses) is relatively small-scale data, complex tech like graph databases are not strictly necessary – but they could be used for queries like “where is this skill covered?” without issue. In short, representing and storing the relational course plan is straightforward; the real challenge is populating it and keeping it updated (a human/process issue more than a tech issue).
- **AI for Structural Reasoning:** Integrating AI to assist with planning and “coverage reasoning” is a novel but plausible aspect. Large Language Models (LLMs) today can analyze text and even do basic reasoning about content coverage. For instance, if provided the list of outcomes and a draft course schedule, an AI could highlight which outcomes appear under-served or suggest content for gaps. AI can also help generate the initial mapping: given a corpus of course materials (lecture notes, descriptions), an AI could attempt to tag each piece with relevant skills or outcomes. Early experiments in academia have shown AI can “analyze course syllabi, learning objectives and assessment methods to identify skill development patterns and competency alignment” automatically <sup>25</sup> <sup>41</sup>. This indicates that an AI agent could accelerate the tedious work of mapping everything by making initial recommendations, which the instructor then refines. Additionally, AI can support **coverage questions** like “Where should I introduce concept Y?” by drawing on large knowledge bases of curricula or prerequisite structures. We should be sober that current AI is not magic – it might hallucinate plausible-sounding mappings that aren’t truly aligned. So the implementation would likely use AI for suggestions and consistency checks rather than fully autonomous design. Feasible AI features include: generating a first draft course outline given a list of outcomes, suggesting re-sequencing of topics for better flow, and even creating assessment questions for each outcome (many instructors already use tools like GPT-4 to draft quiz questions or examples). The key is that AI features must be “**core, not decorative**” <sup>42</sup> – meaning they should directly help solve the structural inconsistency issue (e.g. flagging that Outcome 3 has no assessment, or that Week 5’s lab doesn’t tie to any stated skill). Such rule-based checks combined with AI natural language understanding for more complex inferences are definitely within reach. Technically, a fine-tuned model on curriculum data or few-shot prompting with carefully engineered

prompts could achieve useful results. Given the user's focus, AI isn't for sci-fi autopilot teaching, but rather for nudging the human designer with insights and labor-saving automation – a realistic goal.

- **Export Mechanisms vs. Integration:** Achieving “clean export to real teaching artifacts” is crucial <sup>43</sup>. Here the feasibility is high if we target the right level of integration. The system can produce outputs like: a nicely formatted syllabus document, a set of module pages in HTML or PDF, a CSV of outcomes vs sessions, or even a Common Cartridge package for LMS import. All of these are doable. For example, assembling an LMS package (IMS CC) with module structure, content pages, and quizzes (if any were developed) can be automated – IMS CC is an open XML standard that many LMSes accept. CourseMagic demonstrates this approach by packaging AI-generated courses into IMSCC files for one-click import to Canvas <sup>22</sup>. If not that, simpler routes include copy-pasteable markdown/HTML for each lesson page (some instructors already copy from their Markdown notes into Canvas rich text editors <sup>44</sup>), or direct API usage. Many LMSes (Canvas notably) allow instructors to generate a personal access token and use the LMS API to create or update course content. That means an enterprising user (or a tool acting on their behalf) *can* push updates to the LMS without needing central IT to install an integration – essentially **API-based integration without official approval** <sup>45</sup>. For instance, a script could update all the assignment descriptions in Canvas according to the master plan, ensuring nothing drifted. This is technically feasible (Canvas's API is well-documented and instructor-scoped tokens exist), but would require some tech savvy or trust in the tool. A middle-ground is **semi-automated export**: provide the instructor with files and instructions to import or upload. Even manual steps like “download these updated lecture slides” or “copy this text into your LMS” are acceptable if they ensure the various artifacts reflect the single source-of-truth plan. The bottom line is, deep real-time integration (like a live LTI app embedded in the LMS) is *not* necessary to deliver value, and skipping it avoids the IT policy minefield. Instead, generating artifacts that slot into existing systems via standard import/export or simple copy-paste is a sound and feasible strategy. This keeps the solution aligned with the constraint of being usable immediately by a lone instructor without special permissions <sup>38</sup>.
- **Historical Versioning and Context:** One often-requested feature is preserving history across semesters (e.g. seeing last year's plan vs this year's) <sup>39</sup>. Technically, version control is solvable – even a Git-style approach could be used for course files. The challenge is more UX: making it easy to snapshot a course each term and compare changes. But since instructors commonly copy a prior semester's course and tweak it, the data model could incorporate a parent-child relationship between course versions. Alternatively, exporting the whole map to a JSON or spreadsheet each term can serve as an archival record. This is not a heavy lift technically. Thus, maintaining historical data and enabling change-impact analysis (like “show me what I changed since last term”) is well within reach with straightforward development effort.
- **Compliance and Security Risks:** As discussed, if student data isn't involved, compliance issues are minimal. The main data – course plans – are not private student records. They may, however, be considered the instructor's intellectual work or the university's property in some cases. This means the tool should allow the instructor to export and keep their data easily (which aligns with the need for export anyway). Hosting would need to be secure, especially if using AI APIs (ensuring that any proprietary content isn't inadvertently exposed). But relative to many EdTech systems, this one can be designed to operate with low risk: it could even run locally or on-prem if needed, to alleviate concerns. FERPA is essentially a non-issue if we never handle grades or identifiable student info. One regulatory consideration: accessibility standards (for generated artifacts) and data privacy (if using

cloud AI services – ensuring no student info is part of prompts). These are manageable by proper design (e.g. complying with accessibility in document outputs, and being transparent about AI usage). In short, technical feasibility is not the barrier in this project – the pieces (databases, AI, export formats) are well-known and available. The bigger hurdles lie in design and adoption, not whether it can be built.

## 4. Go/No-Go Recommendation

After weighing the evidence, **my recommendation is to proceed with caution in a constrained, non-venture form – essentially a “Go” on developing a solution, but *not* as a traditional profit-seeking startup.** Here’s why:

- **Problem Importance vs. Solved Status:** The problem of maintaining course coherence and doing impact analysis of changes is real and acknowledged. It’s not *fully* solved by existing tools in the sense of an easy, instructor-friendly, AI-enhanced assistant; however, many partial solutions exist. The presence of competitors like CourseTune, CourseMagic, and even ad-hoc Notion workflows shows both demand and fragmentation. No widely-adopted, one-stop solution has taken hold (especially not among individual instructors). This indicates an opportunity, but also suggests that previous attempts haven’t caught fire – we should be skeptical about “why now would it succeed?”. It appears the *concept* of relational course design is validated, but the *product-market fit* hasn’t been achieved in a mass way outside of institutional mandates.
- **Viability of a Startup Venture:** As a venture-scaled business, this idea is likely a **No-Go**. The market of individual instructors willing to pay (or even consistently use a free tool) is limited. We saw Coursetune pivot away from focusing solely on course-level tuning to broader program mapping because that’s where the money was (institutions need it for accreditation) <sup>29</sup>. That pivot tells us that selling to individual faculty for “course quality improvement” alone was not a sustainable business – customers were more excited by features that serve program directors and provosts (e.g. cross-course mapping, workforce alignment) <sup>30</sup>. Moreover, faculty resistance to overly structured design is a cultural headwind that a startup would have to spend significant resources to overcome (marketing, education, support), further shrinking margins. Enterprise sales (to universities) is a long, tough road for a small startup, and it drags one into exactly the “enterprise procurement” model we want to avoid. In short, the **addressable market that is both reachable and profitable is very questionable** for a standalone company.
- **Potential in a Constrained/Formative Project:** On the other hand, as an open-source project or a free tool, the idea *is* worth pursuing to see if it can gain organic adoption among the enthusiasts who crave it. The emergence of AI gives a fresh angle that wasn’t present in older solutions: we can now build a tool that not only stores the course structure but also actively assists in creating and checking it. This could convert some skeptics by drastically reducing the effort required to maintain alignment. If the tool can auto-suggest where to update things after a change, it directly tackles the “drift” pain point in a new way. Given that some instructors already try to script and automate these tasks <sup>11</sup> <sup>12</sup>, a semi-automated assistant might win fans. However, those fans might be perfectly happy using a free/community solution; turning them into paying customers is not necessary for success (success could be measured in improved courses rather than dollars).

- **Competitive Timing:** We should also note that **if** there were a clear profitable opportunity here, one might expect more startups to have launched in the space. The fact that CourseMagic (2024) is one of the few recent entrants suggests that the window is still open, but it also means we'd be competing with a funded effort that's offering its tool for free (at least to start). That makes a pure startup play even harder – why would a user pay us if a well-backed platform is free or very cheap? It's possible to carve out a niche (e.g. being open-source and highly customizable, whereas CourseMagic is cloud-based and might not fit everyone's needs), but again that points to a community-driven model over a profit-driven one.

**Recommendation:** *Do not pursue this as a funded startup expecting returns.* Instead, consider assembling it as a toolkit or open platform in collaboration with the teaching community. In concrete terms, a go-forward plan could be to build a prototype AI-powered course mapping assistant as an open-source project or a plugin to an existing system (for instance, a Canvas add-on or an Obsidian template with scripts). This way, we bypass the need for a large user base immediately and can focus on solving the problem for those who care most. It also aligns with the instructor-first, no-IT approach: an open-source tool that an individual can run or a browser-based app that stores data locally/cloud for the user. If it succeeds on a small scale (proving enthusiastic uptake in say dozens of universities via individual users), we could reassess its commercial viability or consider partnering with an LMS vendor for wider distribution. But at this stage, the evidence suggests **caution:** many have tried to fix course planning drift, and the lack of widespread adoption implies either the problem is not universally felt as urgent, or the solutions so far have been too cumbersome. We should not sink heavy costs into a new proprietary product without first validating that a simpler solution truly catches on.

In summary, **go forward with solving the problem, but not as a traditional startup venture.** Aim for a lean implementation that can be tested in the wild with minimal risk. If it doesn't gain traction, we accept that outcome (we'll have at least helped a small cadre of users and clarified the real needs). If it does gain a following, opportunities for support or niche monetization (e.g. premium features or consulting) can be explored later. This approach honors the evidence: it acknowledges that while the problem is worth solving, the *business* of it is shaky. So we opt to solve it in a way that maximizes benefit to instructors and minimizes financial failure cost.

## 5. Decision Synthesis: “If This Is Not a Startup, What Is It?”

**Recommended Form:** This initiative is best pursued as an **open-source project or personal workflow toolkit** rather than a commercial startup. In practice, that could mean a free web application backed by an open repository, or a set of plugins/scripts that integrate with popular tools (for example, a VS Code extension or Notion template with an AI assistant). This form ensures low barriers to entry for instructors and sidesteps the need for institutional approval or purchasing. It might be described as an “AI Course Planner Assistant” – available for anyone to use or even host themselves.

**Primary User and Context:** The target user is an individual higher-ed instructor or instructional designer who actively plans and updates course content. They likely teach in a context where course design is complex (multiple outcomes, project components, evolving materials) and have felt the pain of keeping everything aligned. They might be tech-savvy (comfortable with using new apps or add-ons) and motivated to improve course quality. The usage context is during course (re)design and throughout the semester when changes occur. For example, before a new term, an instructor uses the tool to map outcomes to modules and assessments, getting AI suggestions for coverage. During the term, they might log a change



(e.g., “Dropped topic X in Week 3”) and use the tool to see what else that impacts (perhaps an assessment or a later reference). The tool is there to answer structural questions like “Where do I introduce Skill Y?” or “Which materials will be affected if I remove Topic Z?” in an on-demand, assistant-like manner.

**Distribution and Maintenance Model:** As a non-startup project, distribution would rely on community and possibly institutional goodwill rather than formal sales channels. This could involve: sharing the project on platforms like GitHub (for open-source contributions), writing about it on educational technology forums, and perhaps presenting it via teaching center networks or EdTech meetups. Essentially, it spreads by word-of-mouth among instructors who are looking for such a solution. Maintenance could be community-driven if open-source, or sustained by a small core team (perhaps the user and a few collaborators) with support from volunteer contributors. If it proves useful, one could imagine a consortium of teaching centers or an academic innovation grant providing resources to keep it growing. Importantly, because it’s not a paid product, users can adopt it individually without procurement – exactly the “instructor-first” dynamic we want. Updates and improvements would be transparent, and users could even fork or modify it to fit their unique institutional context, which is a bonus for adoption.

**Non-Goals and Exclusions:** This project will *not* aim to become a full enterprise LMS or a comprehensive curriculum management suite for entire institutions. It explicitly avoids features that require handling student records (no grade tracking, no student analytics – those veer into FERPA territory and large-scope product domain). It also is not trying to enforce a one-size-fits-all instructional design methodology; instead of dictating pedagogy, it focuses on consistency and alignment within whatever design the instructor chooses. We also set a non-goal of replacing the LMS – the tool will output to LMS or document formats, not deliver content to students directly (thus no need for complex LTI integrations at launch). By staying narrow – managing relationships between outcomes, content, and assessments with AI assistance – we avoid mission creep. We also acknowledge we are not trying to build a profitable enterprise; therefore, things like aggressive user growth or revenue models are out of scope. Success isn’t measured in dollars, but in utility and adoption. If the approach gains popularity, we might later consider partnerships (for example, with Instructure’s Canvas team if they’re interested), but making a “unicorn” EdTech startup is expressly **not** the goal.

**6–12 Month Success Criteria:** In the next 6-12 months, success would look like a working beta of the system being used and praised by a small cohort of educators. Quantitatively, this could be on the order of, say, 20-50 instructors actively using it to plan upcoming courses, with at least a handful of publicly shared positive testimonials or case studies (“This helped me catch two misaligned labs and saved me hours updating my LMS content!”). We’d want to see evidence of cross-pollination – for example, an instructor who uses it telling colleagues or posting on an education forum about it. If it’s open-source, a healthy sign is active contributions or issue reports from users (indicating engagement). Another marker of success: integration with at least one common workflow. For instance, maybe a user developed an export script for Blackboard or someone created a plugin to import outcome lists from a curriculum database – this would show the tool’s extensibility and community value. Basically, in a year’s time, we aim for a **small but real user base** that finds the tool indispensable in their planning routine. That validates the concept and ensures the project’s future.

**Acceptable Failure:** Failure, in this context, would be if few to no instructors end up using the solution, or if after initial curiosity it falls into disuse. This might happen if the tool is still too cumbersome or if the perceived benefit doesn’t justify changing habits. Because we are not investing big money expecting a return, this outcome is acceptable. It would amount to a learning experience: we’d document why it didn’t

catch on (perhaps instructors needed even more integration, or conversely they found it too complex) and share those insights. The work wouldn't be totally lost – the ideas could inform future developments by others, or parts of the code could be repurposed in other educational tools. In an open-source model, even a “failed” project remains accessible and might be revived later by a niche group. The acceptable failure state is essentially that we **don't cause harm** (no one's relying on it who then gets left stranded, no wasted investor money, etc.) and we glean honest knowledge about what does not work. Considering the modest scope, the worst case is a benign fizzle: a few people try it, shrug, and go back to status quo. That outcome, while not desired, is one we can afford. It reinforces the choice to not over-capitalize this effort. In summary, by pursuing this as a community-minded tool, even failure is a **contained outcome**, and success – even if limited – directly benefits the instructors we set out to help.

**Conclusion:** This approach embodies a realistic, evidence-grounded path: We acknowledge the venture-scale play is unlikely to win, but we see enough value to proceed in a way that prioritizes users over profit. In doing so, we either quietly close a chapter knowing “the world wasn't ready for this as a standalone solution,” or we cultivate a dedicated user community that proves the concept's worth on its own terms. This way, *if it's not a startup, it can still be something impactful – a humble tool that might just make course planning saner for those who choose to use it.*

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