

How AI is reshaping university technology transfer:

----- a practical handbook



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Artificial Intelligence (AI) adoption within technology transfer is being driven by necessity rather than trend.

Disclosure volumes are increasing, portfolios are becoming more complex and resources remain constrained.

Under these conditions, traditional approaches are no longer sufficient to sustain both pace and rigor.

About the guest experts:



Sadhana Chitale

senior director, life sciences & tech transfer, New York University



Jacob Croft

director of licensing and commercialization, The University of Texas at El Paso

Watch the webinar behind this handbook in a one-hour panel session featuring TTO executives and experts from Denemeyer.

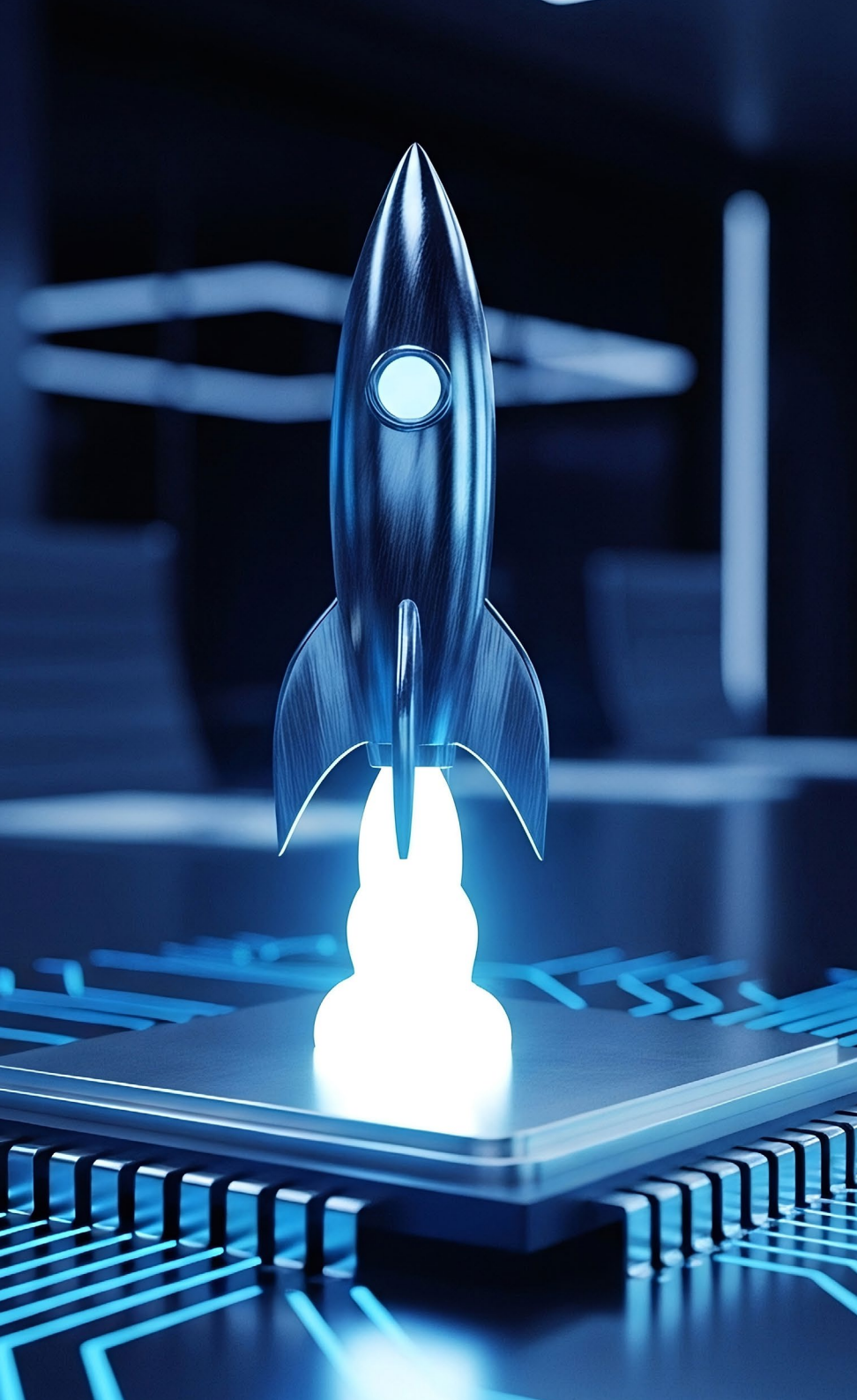
This session explored how AI is reshaping day-to-day IP workflows in TTOs: what reliably works today at the 70 to 80 percent baseline and what still requires human judgment in the critical 20 to 30 percent. We discussed typical time savings of 20 to 40 hours per case and why this matters for small or under-resourced teams. We also covered how specialists can translate AI output into action without false confidence.

Scan the code below to access the recording and learn more information about the speakers:





**Why AI has become
unavoidable
in technology transfer**



Most technology transfer offices (TTOs) face three converging pressures. **Disclosure pipelines are broader and increasingly interdisciplinary**, which makes early evaluation more time-consuming. Expectations for speed have also increased, and **inventors want faster feedback**. Lastly, universities anticipate **the need for clearer and quicker decisions about whether to protect, market or release** Intellectual Property (IP). Many offices manage this workload with small teams responsible for the full life cycle of a case, from assessment through licensing.

AI adoption is accelerating because it directly addresses these constraints. Modern AI tools can process large volumes of technical and market information by scanning prior art, identifying potential partners and generating first-pass summaries at a speed no human can match. Teams can now complete work that once required weeks of manual effort in hours or days.

Experienced practitioners are equally clear about the limits. AI does not understand *institutional strategy, campus dynamics, inventor motivation or commercial nuance*. It is also incapable of *building trust with the faculty, sensing hesitation in licensing conversations or making judgment calls* when the data is incomplete. Humans hold on to those responsibilities.

The solution is balance. AI handles most of the *groundwork*, while *human expertise creates value*.

Put differently, AI gets you 70-80 percent of the way, and people finish the last 20-30 percent. This framing is not a shortcoming, but the exact reason AI is useful: it accelerates early work, freeing people to apply judgment, creativity and relationship-building where it truly matters.





What
70-80 by AI
means in practice



The idea that AI delivers 70–80 percent of the work can sound abstract until it is tied to daily tasks inside a TTO. In practice, this baseline refers to the reliability of AI outputs when used for well-defined, information-heavy activities.

Many of these tasks performed consistently well by AI are essential in the early stages of university technology transfer:



Initial IP analysis

AI identifies relevant technical domains, highlights similar inventions and surfaces patterns that would take a traditional review many hours.



Prior art identification

AI narrows the corpus of relevant patents and publications to a manageable set.



Early market and company mapping

AI identifies active companies, flags comparable deals and suggests potential licensees based on publicly available signals.



Drafting marketing summaries

AI generates clear, structured first drafts that describe a technology's function, advantages and potential applications.

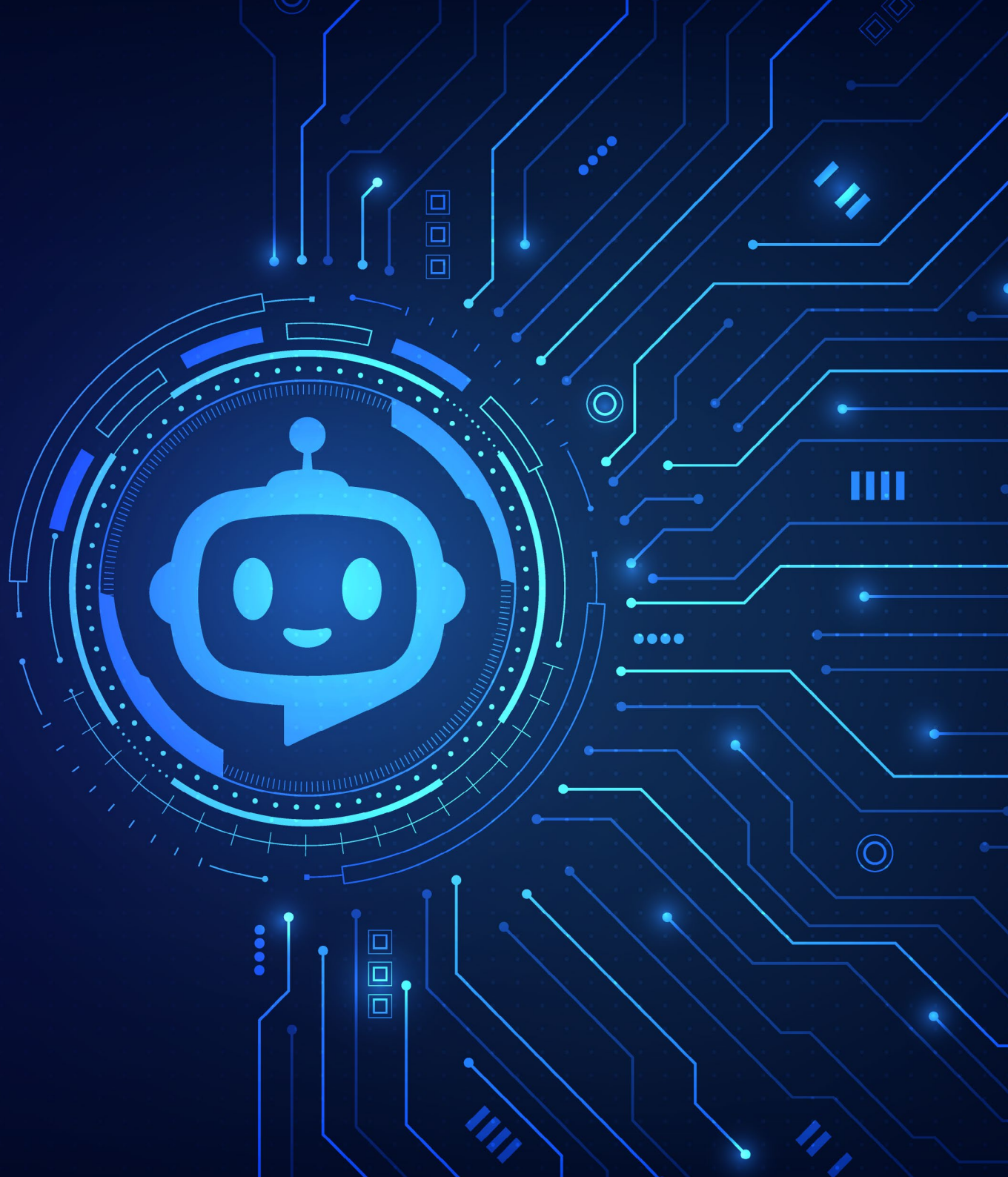
In real terms, this means AI can quickly compile relevant literature, providing teams with a comprehensive starting point for evaluation and reducing the need for extensive manual searching.

What matters most, however, is how these outputs are treated. The 70–80 percent baseline does not mean AI is correct in 70–80 percent of its conclusions. It means that the technology produces material that is directionally precise and useful enough to advance the work. Expecting total accuracy is unrealistic and precarious.

False confidence poses the real risk, as it can lead to:

- Initial outputs being mistaken for finished analysis
- Teams accepting results without sufficient scrutiny
- Undermined licensing strategies
- Value being misrepresented
- Overlooked barriers

These potential pitfalls are why experienced TTOs treat AI results as starting points, not conclusions. Digital tools serve to inform human judgment, not replace it.





**What changes when
early-stage work
is compressed**



AI immediately reduces timelines for early-stage analysis. Tasks that once consumed weeks of staff time can now be completed in a fraction of that window. For small and mid-sized offices, the typical efficiency gains are substantial.

“ The huge time savings the 70 percent gets us is typically about 20 to 40 hours per case. Getting 70 percent of the way from the disclosure to find all the prior arts allows the fine hand of the human to come in and actually extract what is really novel, what is really acclaimed, what is really unique.

Jacob Croft, director of licensing and commercialization at The University of Texas at El Paso

This extra capacity not only speeds up work, but it also changes priorities.

When early work is compressed, teams can shift effort toward higher-value activities, such as:

- Reviewing results more narrowly and strategically
- Engaging inventors more thoughtfully
- Planning outreach and commercialization strategy

These gains do not appear instantly. Teams must test, iterate and remain patient when integrating AI. They need to adapt tools to local portfolios, data sources and institutional policies. Early results may vary, requiring staff to invest additional time in learning how to ask the right questions and critically evaluate outputs.

Offices that succeed treat AI implementation as an ongoing process rather than a one-time deployment. They devote time upfront to realize long-term benefits, even when that investment temporarily competes with daily operational demands.





**Why the final steps
must remain human**



While AI can accelerate analysis, it cannot replace the human elements that define successful technology transfer. Licensing and commercialization are fundamentally people-driven activities.

People do not agree deals through machines; they are negotiated between individuals who assess risk, build trust and align incentives. AI can support these conversations, but it cannot carry them out.

“ Business is not conducted between an AI machine and a company. You need to have the spark of human creativity [...] to engage with whom you’re talking to and actually get them interested in the technology.

Jacob Croft, director of licensing and commercialization at The University of Texas at El Paso

That spark includes several essential human capabilities:

Creativity

Crafting a compelling narrative around a technology requires insight into what a specific audience values. This involves framing benefits, anticipating objections and connecting technical features to real-world problems.

Judgment

Experienced professionals know when data is incomplete, when assumptions are fragile and when context matters more than comparables. They recognize signals that are not captured in datasets, such as shifting regulatory landscapes or cultural resistance to adoption.

Trust

Inventors must have confidence that their ideas are understood and represented correctly. Industry partners must have no doubt that they are engaging with knowledgeable, responsive counterparts. These relationships develop through conversation, consistency and credibility.

Accountability

Humans remain responsible for choices, outcomes and ethical considerations. AI can inform choices without being accountable for them.

For these reasons, the last 20–30 percent of the work must be human-led, as it is where value is created and risks are managed. Offices that attempt to automate beyond this boundary often experience poorer results despite efficiency gains.



**Where AI helps
– and where it falls short –
in commercialization**



AI is particularly strong at analyzing large datasets to show where similar technologies have been licensed, which markets are growing and which companies are active in adjacent spaces. This makes it valuable for initial market orientation and benchmarking.

However, commercialization actions often hinge on factors that require quantification, such as:



Context

AI may identify a technically similar product, but it may not account for differences in reimbursement environments, institutional capabilities or customer behavior. These contextual nuances can determine whether a technology succeeds or fails.



Real-world use cases

Defining product-market fit is not simply a matter of matching features to users. It involves understanding who the customer is, what problem they prioritize and how preferences work in the real world.



Adoption realities

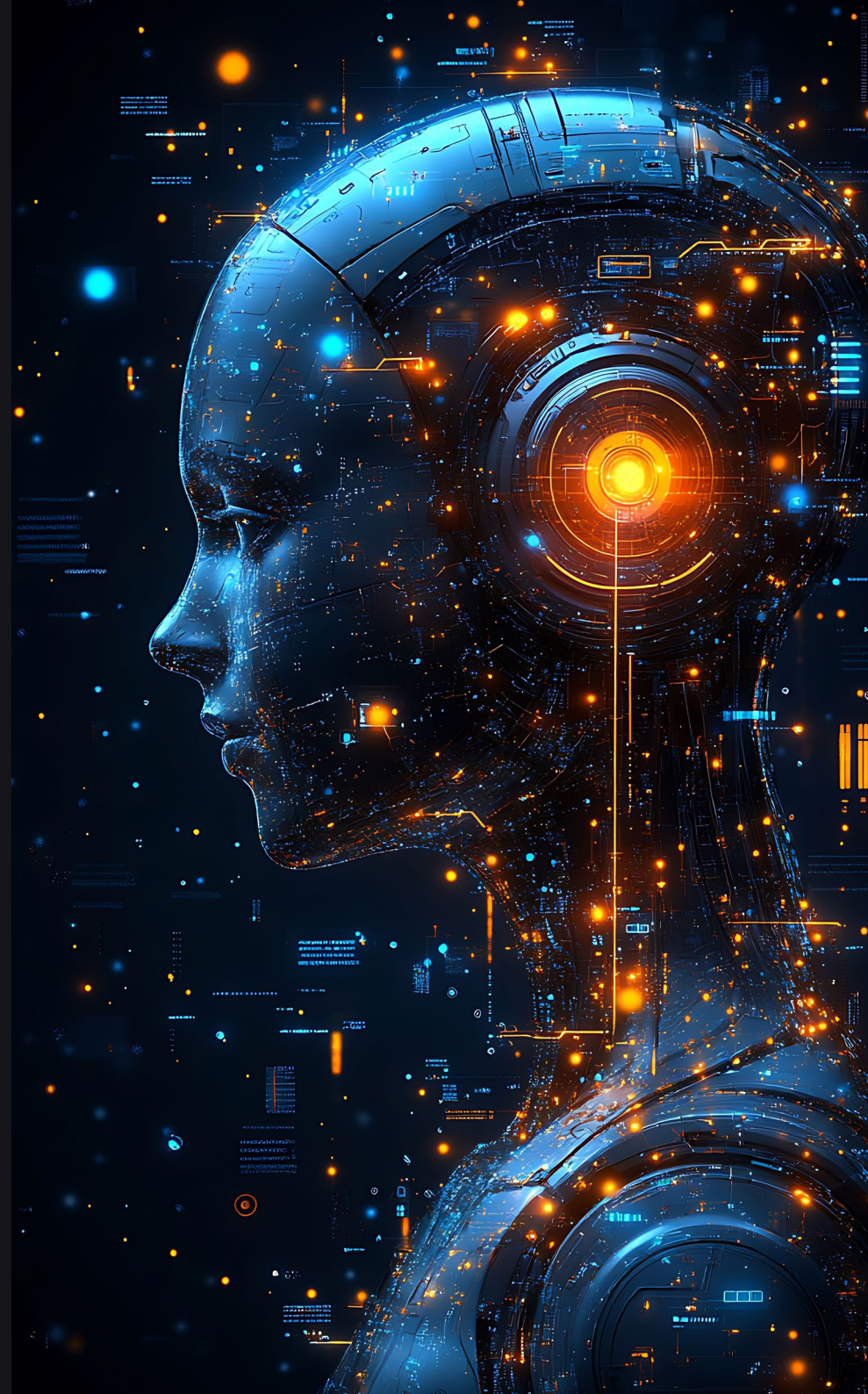
A technically superior solution may struggle if it requires changes to established practices or imposes additional burdens on users. For example, Sadhana Chitale, senior director of life science and tech transfer at New York University, explains that in healthcare, AI may generate a report that appears thorough and accurate, yet misses key real-world issues such as a prior therapy that seemed effective in trials but failed in practice because patients did not adhere to treatment requirements. A human expert with experience would recognize this as a critical risk factor, while AI might not surface that history or its relevance.

This is why marketing narratives require human interpretation and positioning. AI can outline frameworks and pathways, but it cannot decide which story will resonate with a specific audience.

“ If you have a robot talking on one side [...] finding all the information, crafting your message and sending it to a company, who's the company going to talk to?

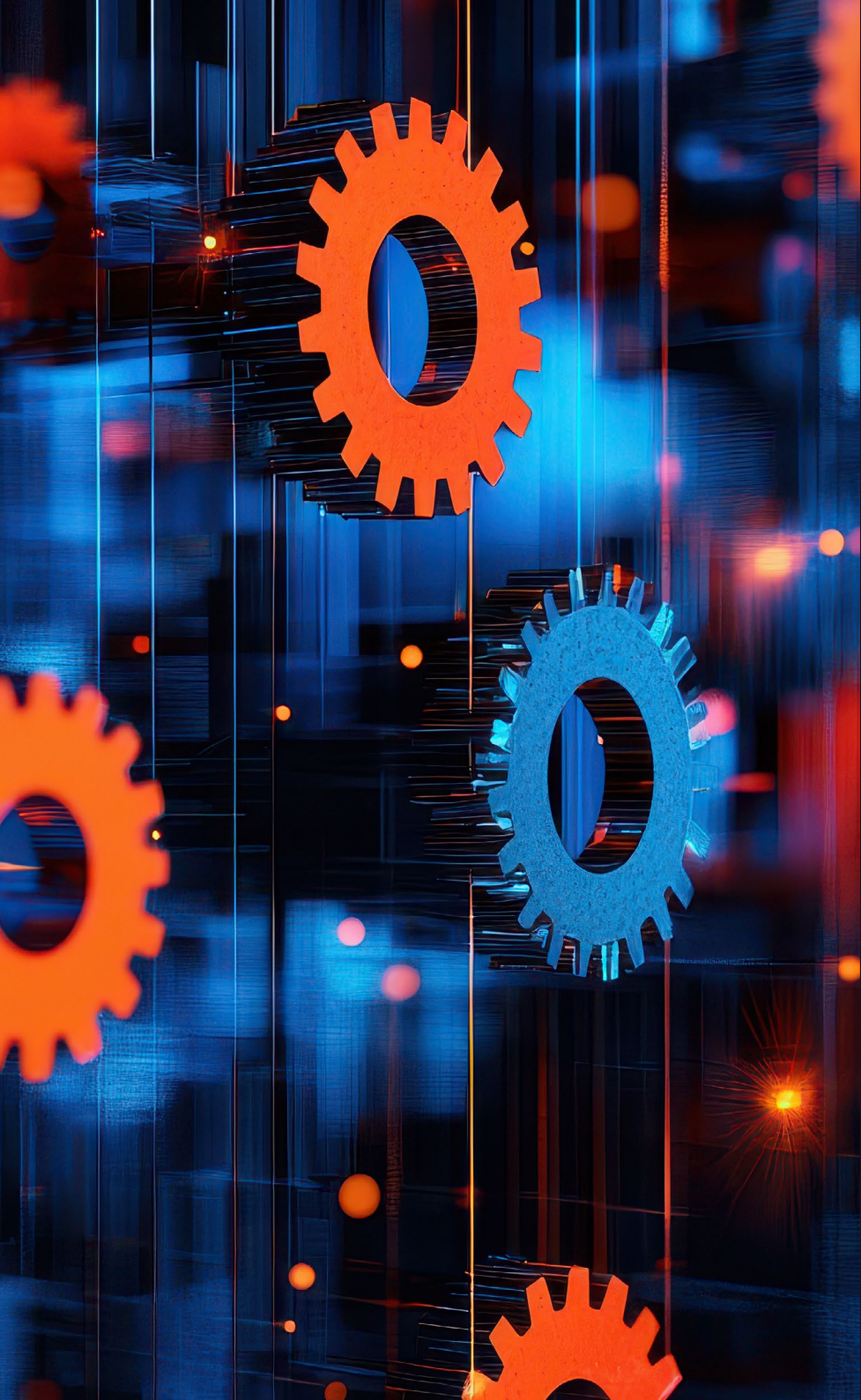
Jacob Croft, director of licensing and commercialization, The University of Texas at El Paso

In practice, successful TTOs are using AI to supply information while relying on human thinking to shape final strategies. They are using AI to ask better questions, rather than answer them conclusively.





Lowering friction
to broaden participation
and reach



Once the core work of evaluation and commercialization is supported effectively, AI enables additional improvements that extend beyond efficiency. One of the most meaningful impacts is the reduction of administrative barriers for inventors. Disclosure processes are often labor-intensive and intimidating, particularly for researchers already carrying heavy clerical loads.

AI helps reduce this friction by automating portions of the disclosure process. For example, generating draft disclosure forms from manuscripts or abstracts means inventors do not need to start from scratch. While these drafts are not perfect, they meaningfully lower the caseload by:



Reducing the time required to complete initial disclosures



Making the process feel more approachable and less intimidating



Allowing inventors to focus on refining ideas rather than formatting inputs

Importantly, this does not reduce human interaction. In many cases, it increases it by freeing staff time for conversation and support. This creates the environment for the deal-making that can only happen through relationships.

AI also expands reach by helping offices identify connections that might otherwise be missed, including:

- Highlighting complementary research across departments or campuses
- Suggesting internal collaborations earlier in the process

These insights support more proactive outreach without replacing the need for personal engagement. For small offices in particular, the benefits of AI add up quickly. With routine work automated, staff can be more visible on campus, meeting researchers, building trust and engaging in conversations that often surface emergent innovations before they are formally disclosed. In this way, AI contributes indirectly to inclusion and interaction by enabling staff to be more strategically present.





**AI strengthens capacity,
humans shape decisions**



AI is reshaping university technology transfer, without redefining its purpose. Rather, AI expands what small and large offices alike can accomplish with limited resources.

Used well, AI amplifies expertise. It accelerates analysis, reduces administrative burdens and expands the scope of what teams can consider. It also enables professionals to spend more time on judgment and interactions. Used unwisely, AI can result in false confidence and eroded trust. This is why the most effective TTOs understand that AI is a tool, not a decision maker.

“ AI has challenged all of us to up our game. We should all just embrace it. Empower ourselves.

Sadhana Chitale, senior director, life sciences & tech transfer, New York University

Empowerment does not mean surrendering responsibility, but rather adopting AI critically and in service of human expertise. TTOs that strike this balance will begin moving faster, making better decisions and building stronger partnerships. This is the real, practical value of using AI in university technology transfer.

