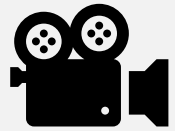


Building a Generative AI Roadmap: Strategic Adoption for Competitive Advantage

AI: The Strategic Frontier –
Beyond the Hype to Real-World Impact Webinar Series
Episode 2

Before We Get Started



Recording

A link to the recording and slides will be emailed to all registrants.



Recording

Type in the question box, and we will answer in real time or during the Q&A.



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Panel



Jim Hallenbeck

Chief Executive Officer and President,
Black Hills AI



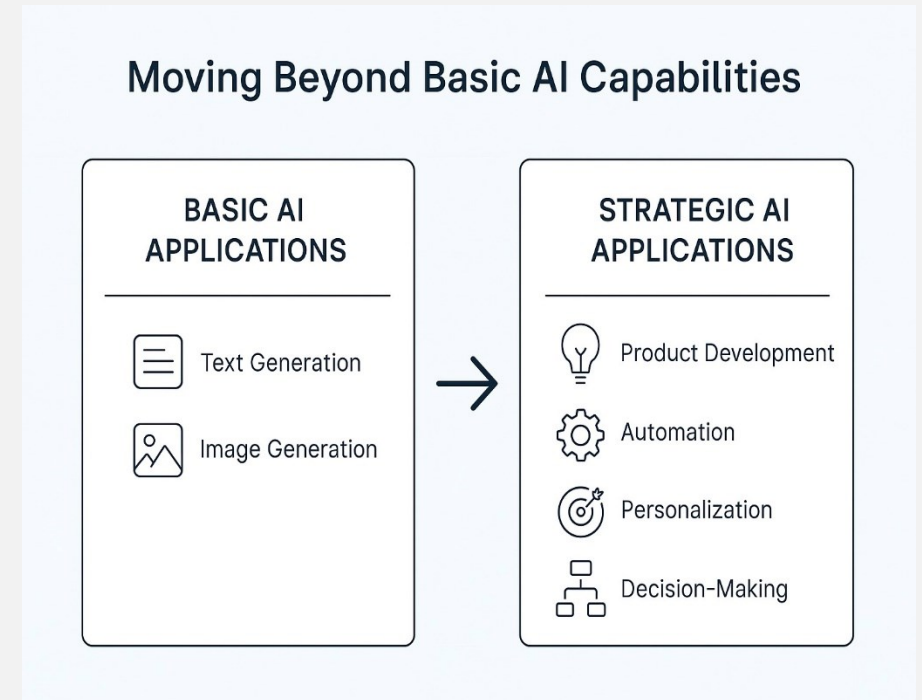
Manjeet Rege

Director of Center of Applied
Artificial Intelligence and Professor,
University of St. Thomas
Advisor to Black Hills AI

Beyond Content Creation

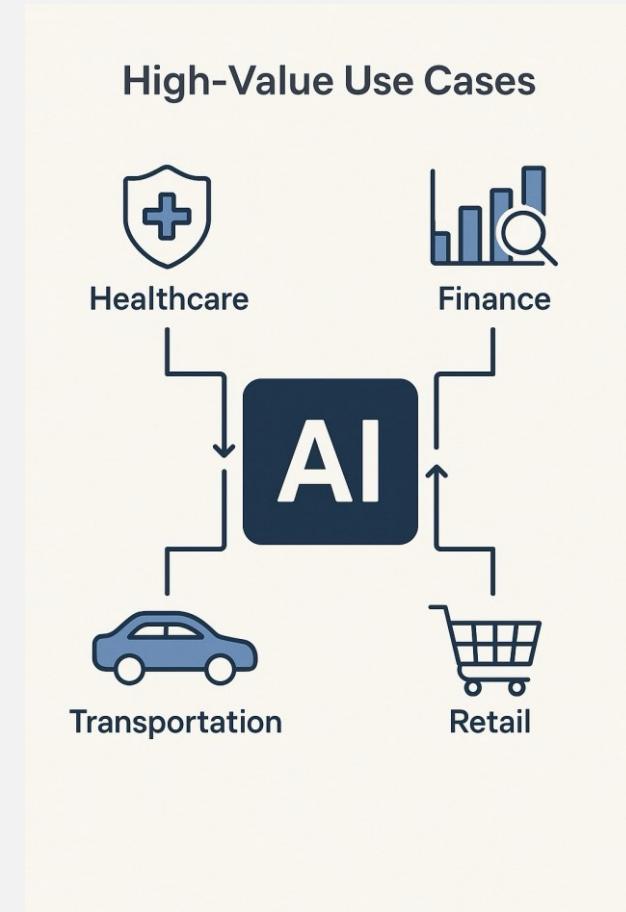
AI is more than just text and image generation.

Enterprises should focus on strategic applications that enhance business operations. Align AI capabilities with core business goals for maximum impact.



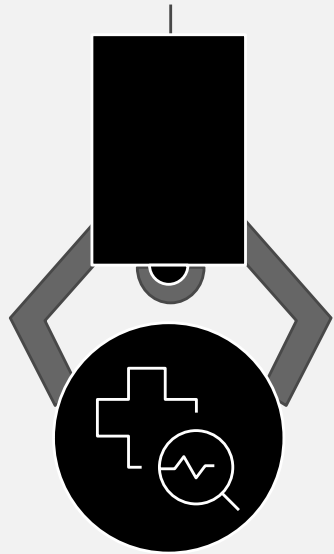
Key Areas Where Generative AI Delivers Value

- Product Innovation & Prototyping
AI accelerates ideation and design
- Marketing & Customer Engagement
Personalized campaigns & automated content
- Knowledge Management
AI-powered document automation and search
- Software Development
AI-generated code, debugging



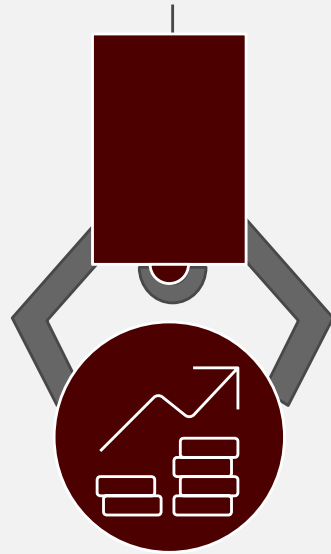
Industry-Specific AI Applications

AI Applications by Industry:



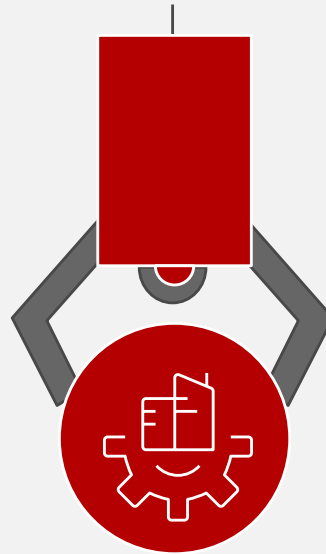
Healthcare

AI applications in healthcare.



Financial Services

AI applications in finance.



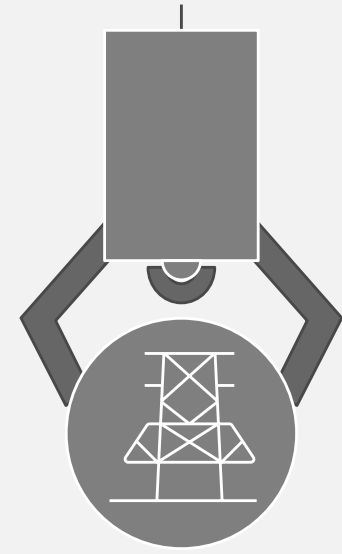
Manufacturing

AI applications in manufacturing.



Retail

AI applications in retail.



Energy

AI applications in energy.

Case Studies: Product Innovation and Rapid Prototyping

Microsoft's Collaboration with OpenAI: Under CEO Satya Nadella's leadership, Microsoft partnered with OpenAI to integrate generative AI into its product development processes. This collaboration enabled Microsoft to enhance its product offerings and maintain a competitive edge in the rapidly evolving tech landscape.



Personalized Marketing and Customer Engagement

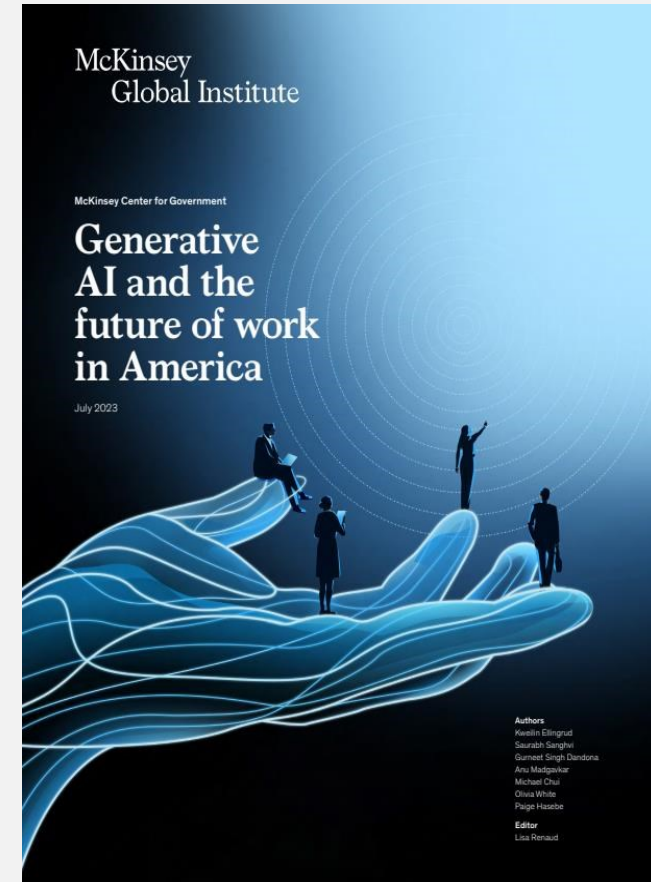


The Papa John's store in Westminster, Colorado, U.S. August 1, 2017. REUTERS/Rick Wilking/File Photo [Purchase Licensing Rights](#)

Papa John's Partnership with Google Cloud: Papa John's International expanded its collaboration with Google Cloud to integrate AI into its pizza ordering processes. This initiative aims to personalize customer interactions, including push notifications, marketing emails, and loyalty offers based on past behavior, enhancing overall customer engagement.

Knowledge Management and Internal Content Creation

McKinsey's Development of Lilli, a Generative AI Tool: McKinsey developed 'Lilli,' a generative AI platform that streamlines access to the firm's vast knowledge base, enhancing internal research and content creation processes.



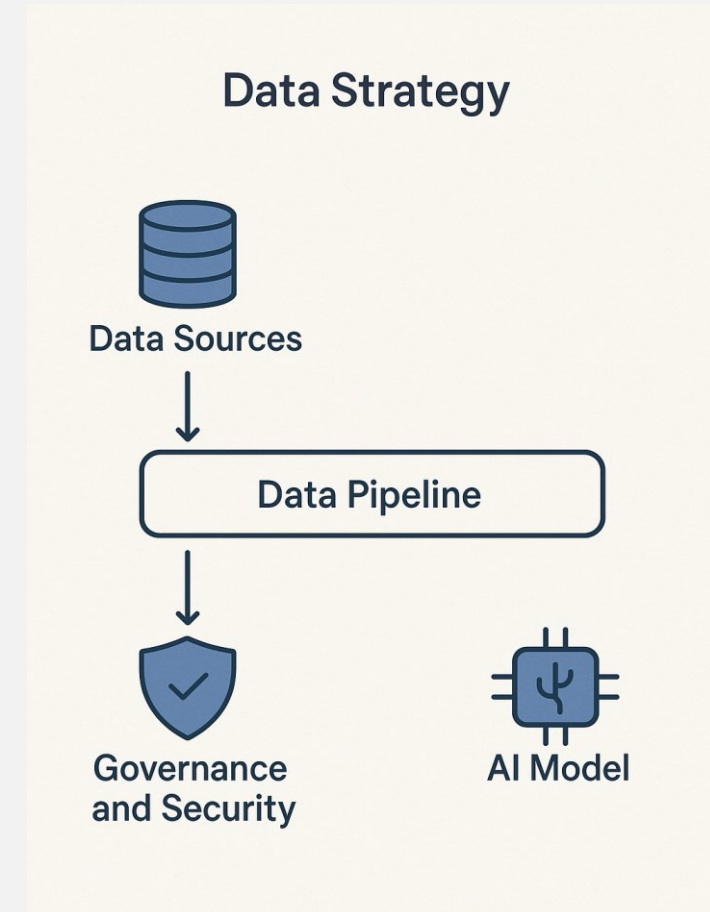
Code Generation and Software Development Acceleration



JPMorgan Chase reported a 20% increase in software engineers' efficiency after implementing an AI coding assistant. This tool allowed engineers to focus more on high-value projects, particularly in artificial intelligence and data, by automating routine coding tasks.

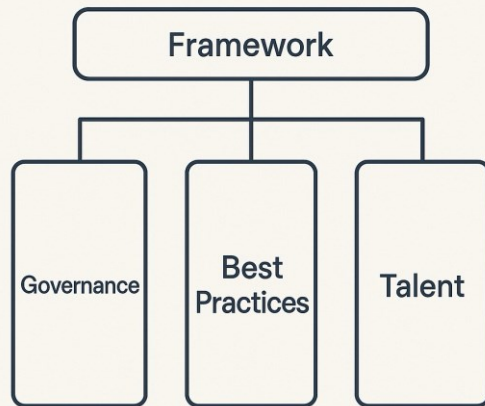
Data Strategy for Generative AI

- Data Quality Matters
 - AI models need clean, relevant, and structured data.
- Security & Compliance
 - Protecting sensitive business and customer data.
- Data Governance
 - Standardized policies for ethical and responsible AI use.



Establishing Governance, Best Practices, and Talent Development

Generative AI Center of Excellence



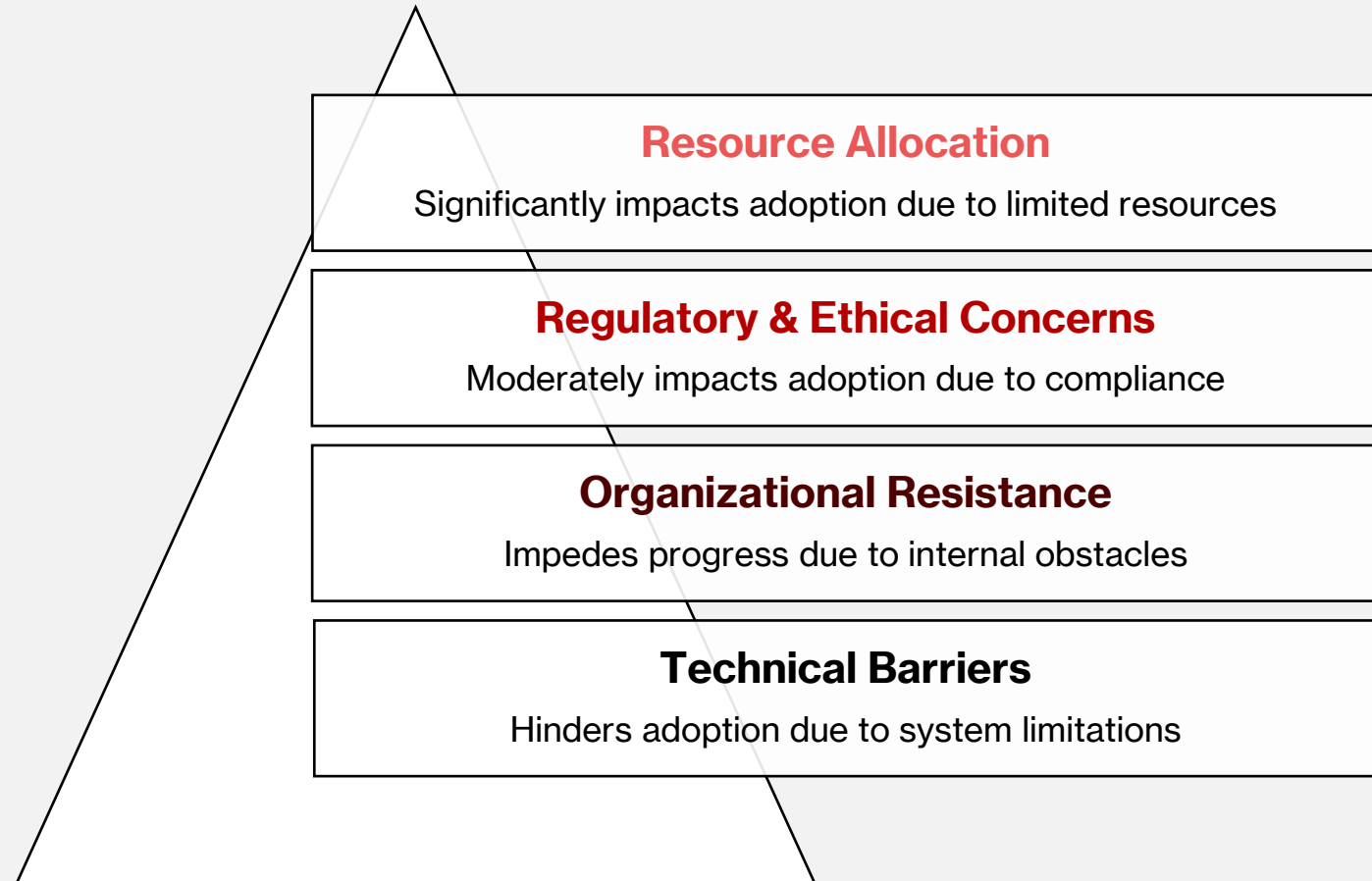
- Governance & Ethics
 - Define AI policies and risk management strategies
- Best Practices
 - Standardized AI deployment and monitoring
- Talent Development
 - Upskilling teams to work alongside AI

AI Implementation Challenges & Mitigation Strategies

High Concern

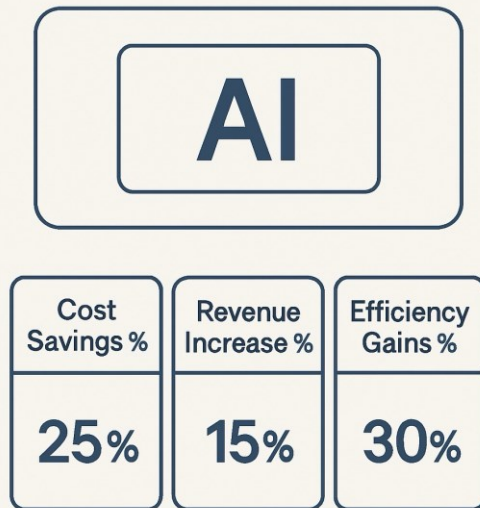


Low Concern



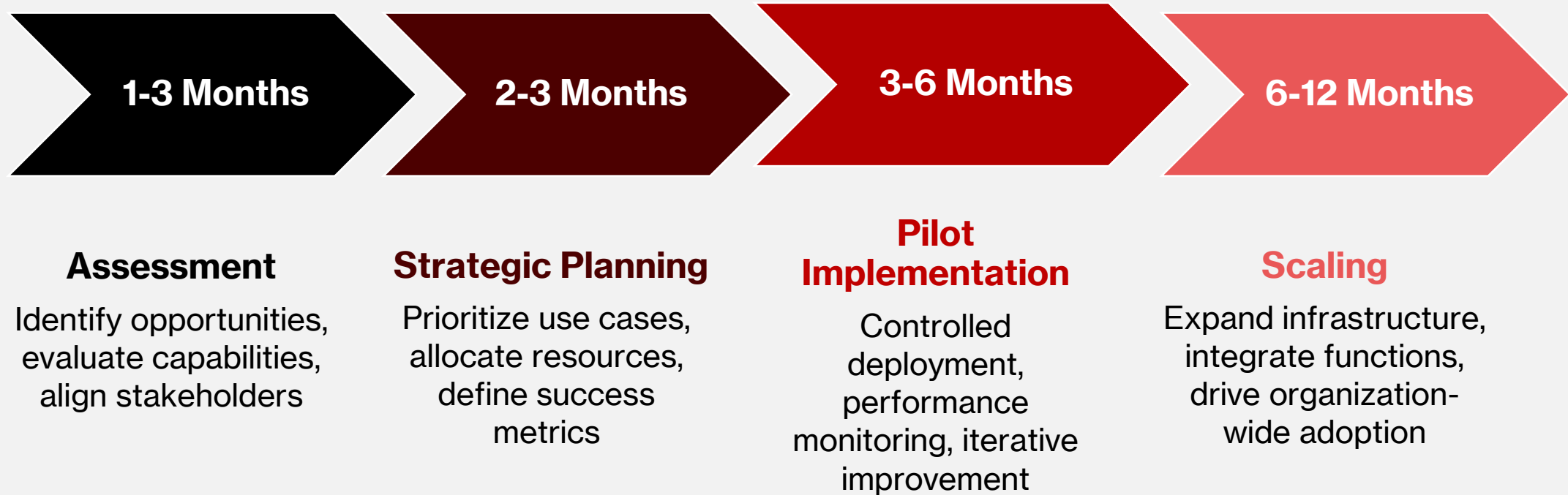
Building a Generative AI Center of Excellence

Measuring ROI



- Efficiency Gains
 - Time and cost savings from AI automation
- Revenue Growth
 - AI-driven personalization and new business models
- Operational Impact
 - Faster decision-making and productivity improvements

Practical Implementation Roadmap



Measuring ROI and Impact

- AI adoption should be strategic, not just experimental.
- Enterprises must invest in data, governance, and talent.
- Focus on measurable outcomes to drive continuous AI innovation.



Future Trends in Generative AI

- Multimodal AI
 - Systems that combine text, image, audio, and video processing
- Autonomous Agents
 - AI that can perform complex tasks with minimal human supervision
- Regulatory Evolution
 - Increasing government oversight and compliance requirements
- Specialized AI Ecosystems
 - Industry-specific AI models and platforms
- Human-AI Collaboration
 - New workflows and interfaces for AI augmentation

The Future of Patent Generation and Management

Automation and AI-Powered Transformation

Agenda

- The Need for Efficiency
- Revolution: AI & Automation Flipping the Tables
- Prepare for the Transition
- Integrate and Implement: Technology and People Too
- Opportunity and Examples of Use
- Differentiators For Choosing a GenAI Tool

A Storm of Confounds

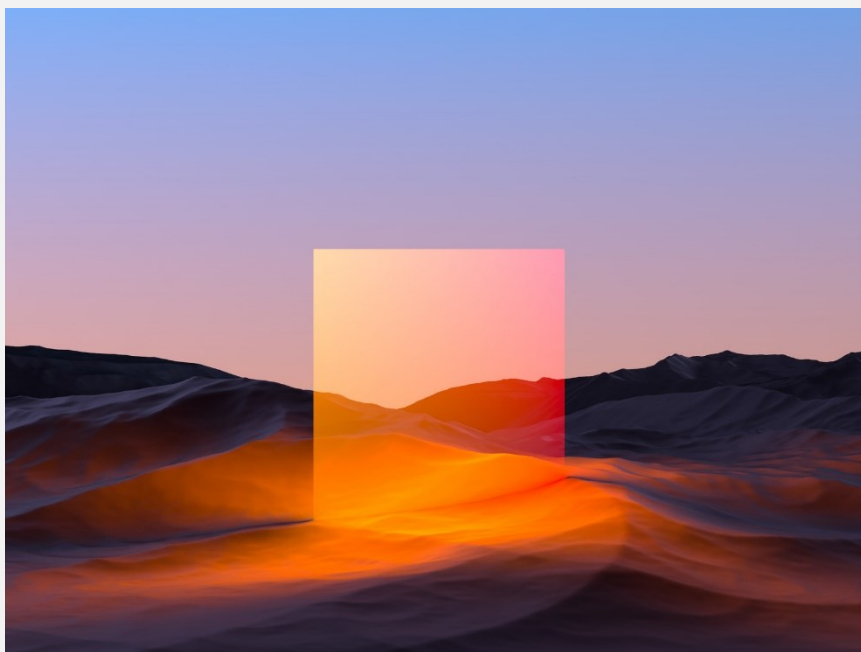
- Business operating costs are up
- Law firm expenses are up while budgets are flat
- Attorneys are being forced to work more hours just to maintain their current pay
- Talent and skill are hard to recruit and retain



The Result: Two Solutions

- In-house and outside counsel IP teams must be more efficient, accurate, and effective
- Two solutions are available:
 - 1. Automation
 - 2. Generative AI

Dawn of a Revolution



- AI and Automation are transforming the landscape of modern patent practice
- Anything that can be automated, will be automated.
- Routine tasks can be translated into logic and executed faster at a lower cost and with greater accuracy
- Generative AI prompting is replacing the need for coding customization
- Generative AI is readily available, secure, adaptable, and can be inexpensive

The Case for Automation and AI

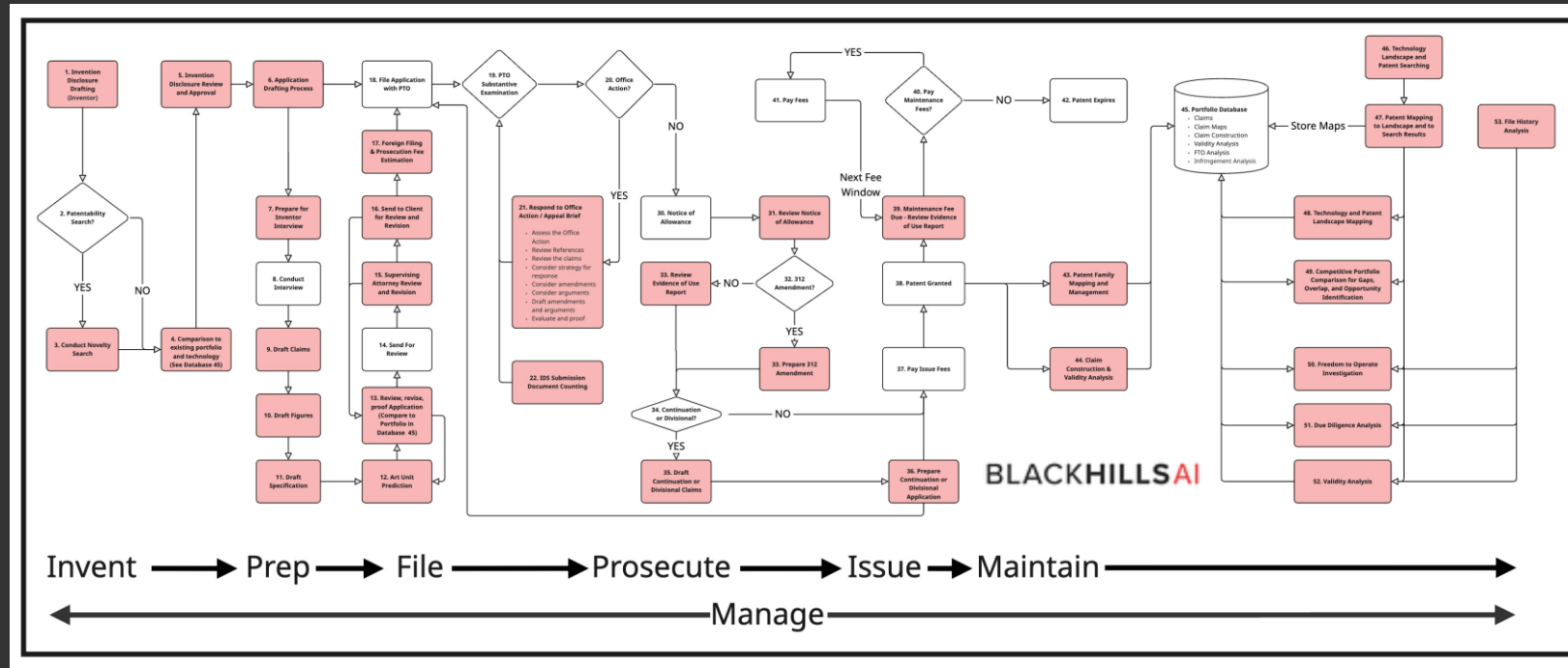
- Step 1: Eliminate Work.
 - Replacing manual tasks with automation, which can include modifying processes, forms, and moving away from what is comfortable, to what is profitable
- Step 2: Replace Work.
 - Integrating GenAI into tools to assist in performing, creating, and reviewing remaining tasks and work product for faster execution, greater accuracy, control cost, and achieve better outcomes.

Why Automate and Use AI?

- Eliminate Work
- Increase productivity
- Accelerate execution
- Optimize processes
- Maximize work product quality
- Manage Expense
- Improve client experience



To This...



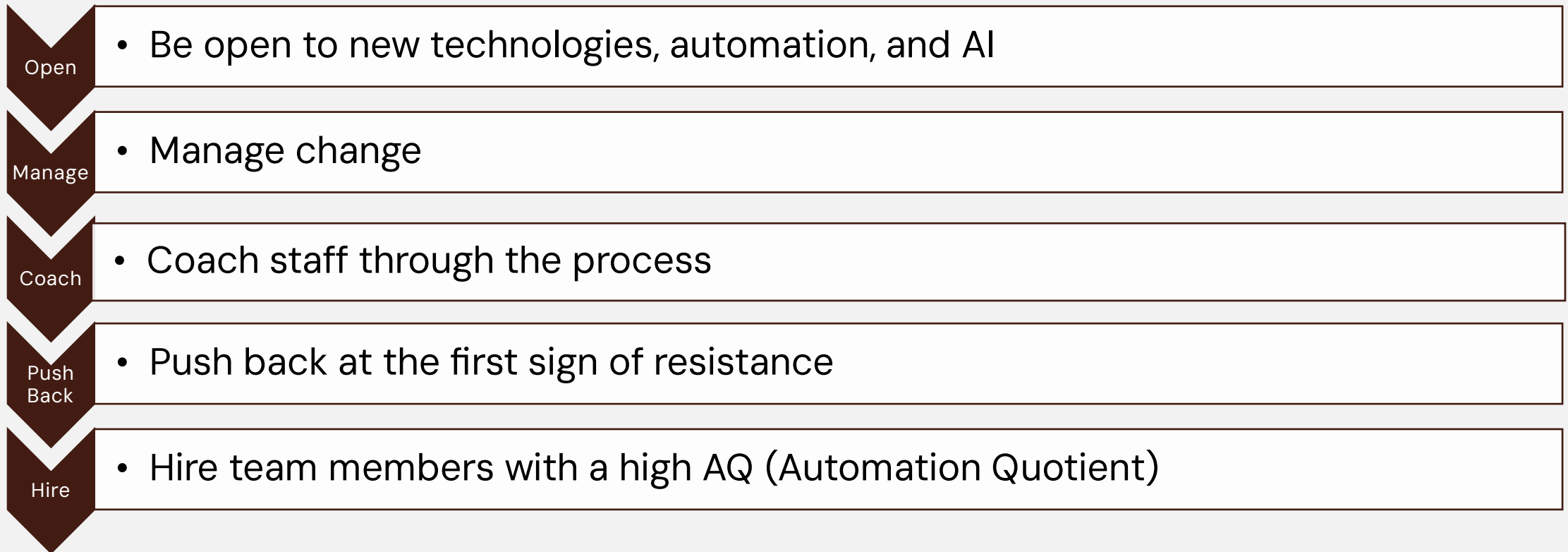
Every box can include an element of automation, and every shaded box can be performed or assisted by GenAI.

How Do We Transition to Automation and AI?

Guiding Principles for AI and Automation

- Security, confidentiality, prudent risk mitigation
- Align decisions with business and IP strategies
- The right decision is the one that allows future flexibility
- Open APIs to enable access to data and functions between systems
- Standardize, document, and share processes and document formats
- Monitor metrics measuring automation v. manual
- Communicate and share
- Continuous improvement mindset
 - Borrow culture from your engineering teams
- Facilitate a path to YES, even if qualified
- Review GenAI output that will be filed, submitted, or otherwise relied upon

How Do We Transition to Automation and AI?



How Do We Succeed in Transitioning to Automation and AI?

- Leadership Matters
 - Get buy in from the top, articulate the vision, and execute
- Defeat the Skeptics
 - Some will be skeptical, but automation really began with the industrial revolution and the production line and has advanced from there
 - With GenAI, we are now well into the professional services equivalent and law practices must prudently avail themselves of the benefits of AI for productivity, thoroughness, and accuracy

How Do We Succeed in Transitioning to Automation and AI?

- AI does present challenges, and some will be resistant
 - Revisit outside counsel guidelines/firm agreement letters and contemplate use of AI
 - Review firm and vendor insurance coverages, in particular cyber coverage
 - Craft consistent internal and external messaging regarding AI usage, what is allowed, what is not, and any requirements
 - Remain vigilant regarding security
 - Closely review vendor terms of use
 - Update retention policies regarding your AI tools

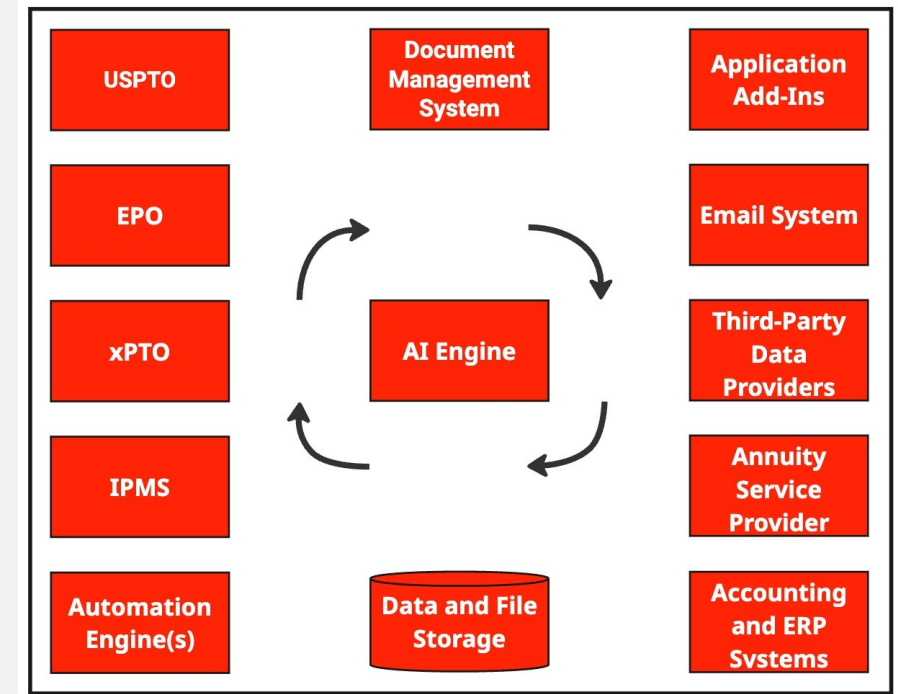
How Do We Succeed in Transitioning to Automation and AI?

- AI provides great opportunities
 - A no from one client does not apply to all clients
- Do not be dissuaded by fear
 - Fears will either fade or advancements will move the technology beyond the confounds

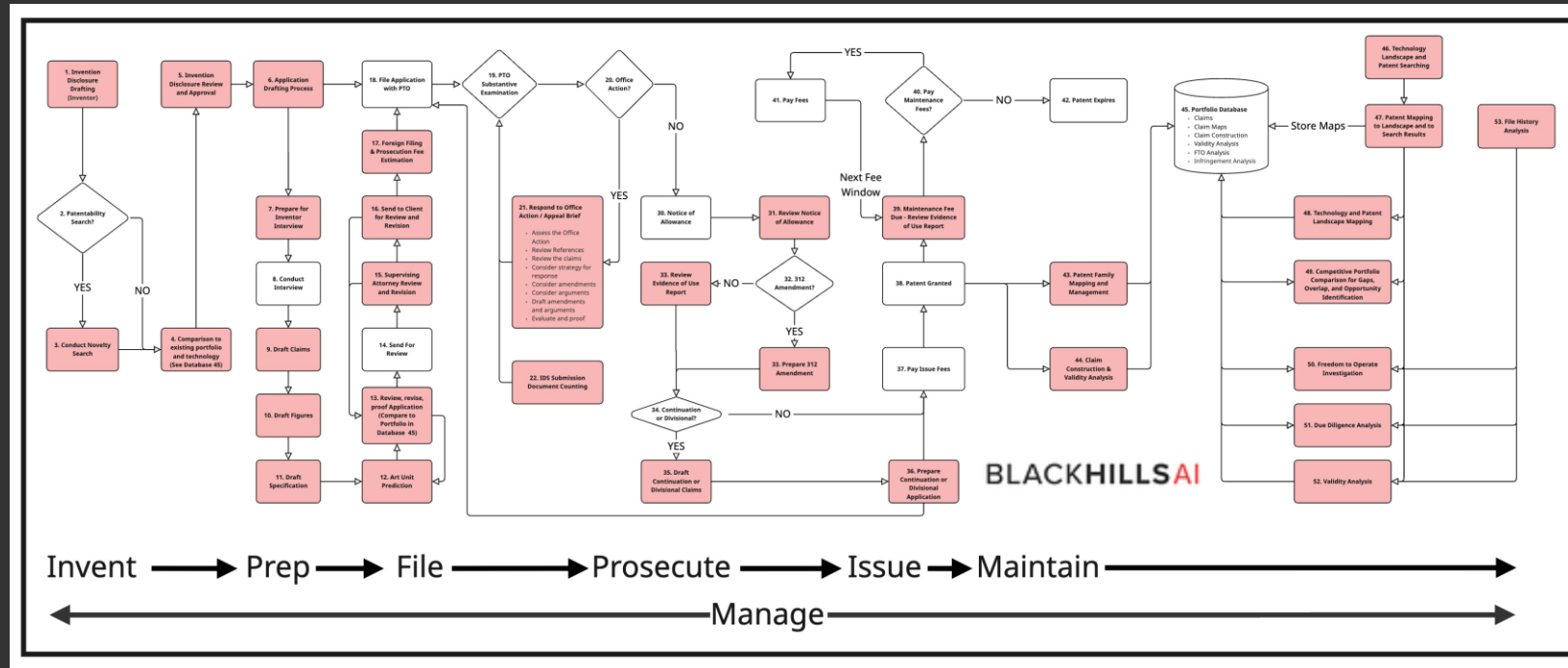
How Will AI and Automation Work?

Start with an Integrated Technical Environment

- Data and functional services are readily accessible between systems and entities
- Data, content, and documents can be derived, generated, and communicated
- When the underlying data, documents, and services are available, AI generation of work product predicates is enabled



Automation and AI Convergence



Work product predicates can be created and flow as illustrated.
These flows can be customized and tailored.

Results

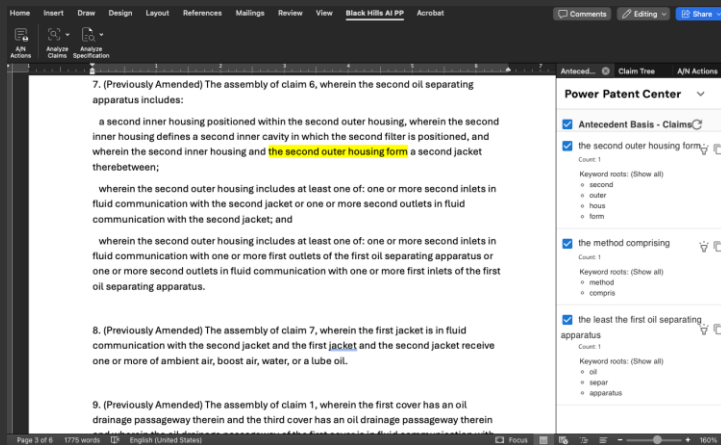
- 60–80% reduction in manual tasks, e.g., docketing, shells, summaries, reporting, etc.
 - i.e., 2 ½ – 5 times productivity increase for back-office employees
- Increase speed from disclosure to filing
- Greater thoroughness and accuracy in developing and reviewing work product
- Faster review/oversight, more accurate, and routine checks can be pushed down to working attorney via shared prompts
- Rapid correspondence drafting and summarizing
- Enable staff performing more sophisticated tasks
- Generate and review contracts with great efficiency
- Enable efficient, higher quality work within budget
- Examine applications and responses pre-filing

Uses

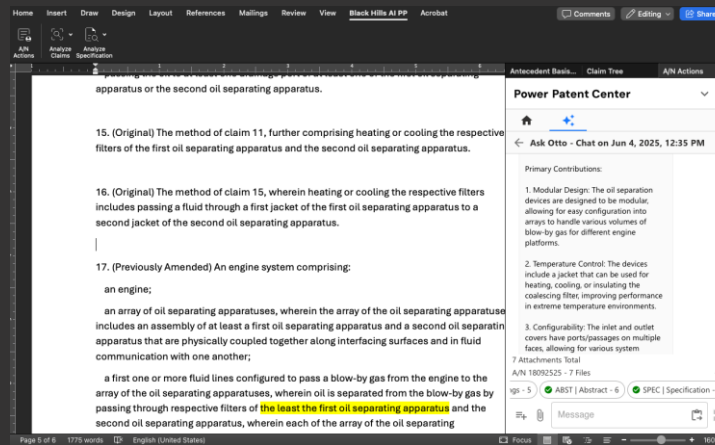
Reviewing Disclosures & Drafting Applications

- Assess disclosures, generate quick examples of what claim coverage may look like, and compare to existing portfolio and what is generally known in the art
- Include draft claims with disclosure when sending to the drafting attorney
- GenAI used by drafting attorney to:
 - Prepare for inventor interviews
 - Create/complete the claim set
 - Generate figures
 - Draft portions of the specification
 - Title recommendations
 - Proof draft including verifying all subject matter from disclosure is included
 - Art Unit Prediction
 - Pre-filing examination in view of LLM knowledge and any known prior art

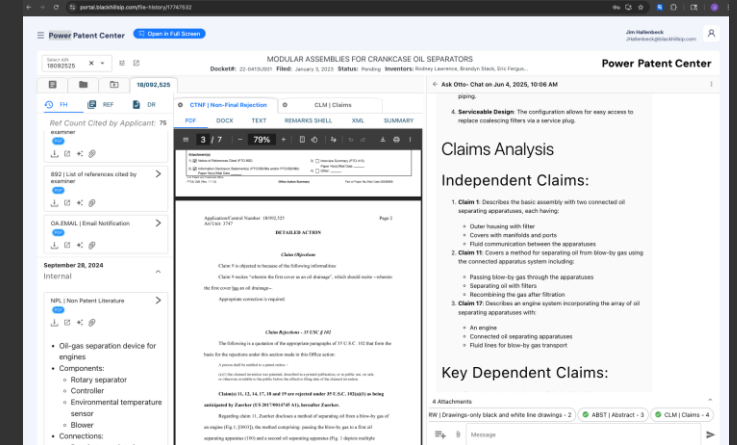
Assessing Office Actions, Drafting a Response, and Reviewing Drafts



Word



Word



Browser

- Follow your normal process, but with an AI tool.
- Don't skip steps or you will likely get a decent sounding response that deviates from reality.
- Multiple integrated working environments available

Generative AI Use Cases

- Patent Application Drafting
 - Drafting patent claims
 - Writing detailed specifications
 - Preparing abstracts
 - Developing background sections
 - Creating summary sections
 - Structuring detailed descriptions
 - Organizing drawings sections
 - Ensuring consistent terminology
 - Improving clarity and precision
 - Checking for enablement issues
 - Reviewing written description support
 - Suggesting alternative claim language
 - Identifying potential §112 issues
 - Analyzing claim scope
 - Checking claim dependencies
 - Reviewing antecedent basis
 - Suggesting structural improvements
 - Reviewing format compliance
- Office Action Responses
 - Drafting claim amendments
 - Writing detailed arguments
 - Preparing remarks sections
 - Developing interview summaries
 - Creating response outlines
 - Structuring declarations
 - Organizing supporting evidence
 - Analyzing cited references
 - Reviewing rejection grounds
 - Identifying distinguishing features
 - Suggesting argument strategies
 - Developing technical explanations
 - Checking support for amendments
 - Evaluating §101/§103/§112 rejections
 - Formatting responses
 - Preparing claim listings
 - Creating amendment markups
 - Drafting preliminary amendments
 - Structuring after-final responses
 - Developing advisory action responses
 - Preparing RCE submissions
- Pre-Application/Invention Development
 - Breaking down technical concepts
 - Identifying key components
 - Analyzing inventive features
 - Structuring invention elements
 - Developing component relationships
 - Organizing technical descriptions
 - Mapping functional relationships
 - Creating invention outlines
 - Developing embodiment frameworks
 - Organizing feature hierarchies
 - Preparing component lists
 - Developing functional flowcharts
 - Structuring system architectures
 - Organizing invention records
 - Developing feature matrices
 - Creating component diagrams
 - Preparing invention summaries
 - Structuring invention notebooks

Generative AI Use Cases

- General Legal/Litigation Support

- Quick contracts from templates
- Contract review and markup
- Legal document organization
- Document summarization
- Agreement analysis
- Policy review
- Terms and conditions review
- Due diligence support
- Legal memoranda drafting
- Briefs and motions drafting
- Demand letters
- Settlement agreements
- Corporate documents
- Legal correspondence
- Meeting minutes
- Case summary preparation
- Evidence organization
- Timeline creation
- Fact pattern analysis
- Deposition summaries
- Discovery document review

- General Legal/Litigation Support (cont'd)

- Corporate governance documents
- Board resolutions
- Operating agreements
- Partnership agreements
- Employment contracts
- NDAs and confidentiality agreements
- Business formation documents
- Policy drafting
- Compliance document review
- Regulatory requirement analysis
- Procedure documentation
- Compliance checklist creation
- Risk assessment support
- Audit preparation assistance

- Quality Control

- Checking for grammatical errors
- Ensuring consistent numbering
- Verifying reference character usage
- Reviewing figure descriptions
- Cross-checking specifications
- Checking description completeness
- Reviewing technical consistency
- Verifying component relationships
- Analyzing description clarity
- Reviewing terminology usage
- Checking functional descriptions
- Validating technical accuracy
- Document-based legal analysis
- Contract term comparison
- Legal document categorization
- Historical document review
- Policy interpretation
- Procedural requirement analysis

Generative AI Use Cases

- Patent Portfolio Management

- Organizing patent families
- Tracking related applications
- Creating continuation strategies
- Developing divisional plans
- Maintaining invention records
- Organizing office action responses
- Tracking amendment history

- Administrative Support

- Organizing prosecution histories
- Creating document indexes
- Preparing filing checklists
- Developing response timelines
- Organizing invention disclosures
- Creating document summaries
- Maintaining document histories

- Training/Educational Support

- Creating process documentation
- Developing procedure guides
- Organizing training materials
- Preparing reference documents
- Creating best practice guides
- Developing workflow documents
- Organizing reference materials

- Translation Support

- Reviewing translated patent documents
- Checking terminology consistency
- Verifying technical translations
- Comparing multi-language specifications
- Reviewing foreign office action translations
- Analyzing translated prior art
- Checking claim correspondence

- Client Communication Support

- Drafting status updates
- Preparing technical summaries
- Creating prosecution updates
- Developing strategy explanations
- Organizing rejection summaries
- Preparing amendment explanations
- Creating office action summaries

- Many more coming

AI won't replace you,
but the person using AI will.

BLACKHILLSAI

How Do We Succeed in Transitioning to Automation and AI?

- Integration
 - How does the tool integrate with other systems, data, and data flows?
- Interface/Wrapper
 - Is the interface, or interfaces, provide a comfortable, easy to use environment?
- Stored Sessions
 - Are sessions maintained from when leaving and returning or for later retrieval?
- Stored and Shared Skills/Prompts
 - Are there included, predefined prompts and guided skills?
 - Can you store and share skills/prompts for later use and use by others?
- Collaboration
 - Can you share your sessions with others?
- Security
 - LLM Zero retention API and compliance with an acceptable security posture?
- Cost
 - There are many tools on the market and pricing of some/many does not reflect this competition or the underlying operating cost.

Transforming Your Practice

1. Increase productivity
2. Accelerate execution
3. Optimize processes
4. Maximize work product quality
5. Manage Expense
6. Improve client experience

- Anything that can be automated will be automated
- AI can increase efficiencies for many tasks
- In concert, Automation and AI provide opportunities to greatly enhance your practice
- AI provides a new set of manageable Ethical challenges

Thank you for your interest.

Questions?

Jim Hallenbeck

jhallenbeck@blackhills.ai