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Risk Management in the Age of AI And Other Exponential Technologies

Thriving in Turbulent Times

**RISK
BEYOND
2023**

**ERMA
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7-8th
Dec
2023



**INTO THE UNKNOWN:
CHARTING THE FUTURE AGENDA**



riskbeyond.com

AI



What We Will Cover

1. A Call to Action
2. Risk Management for AI
3. AI for Risk Management
4. Predictions





THE
FUTURE IS
FASTER
THAN YOU
THINK

How Converging Technologies
Are Transforming Business,
Industries, and Our Lives

PETER H. DIAMANDIS and **STEVEN KOTLER**

New York Times Bestselling Authors of
ABUNDANCE and **BOLD**

50 Years of Moore's Law



In 1973, the fastest supercomputer was the CDC 7600 which peaked at about 36 megaflops, or 36 million floating-point operations per second (FLOPS)

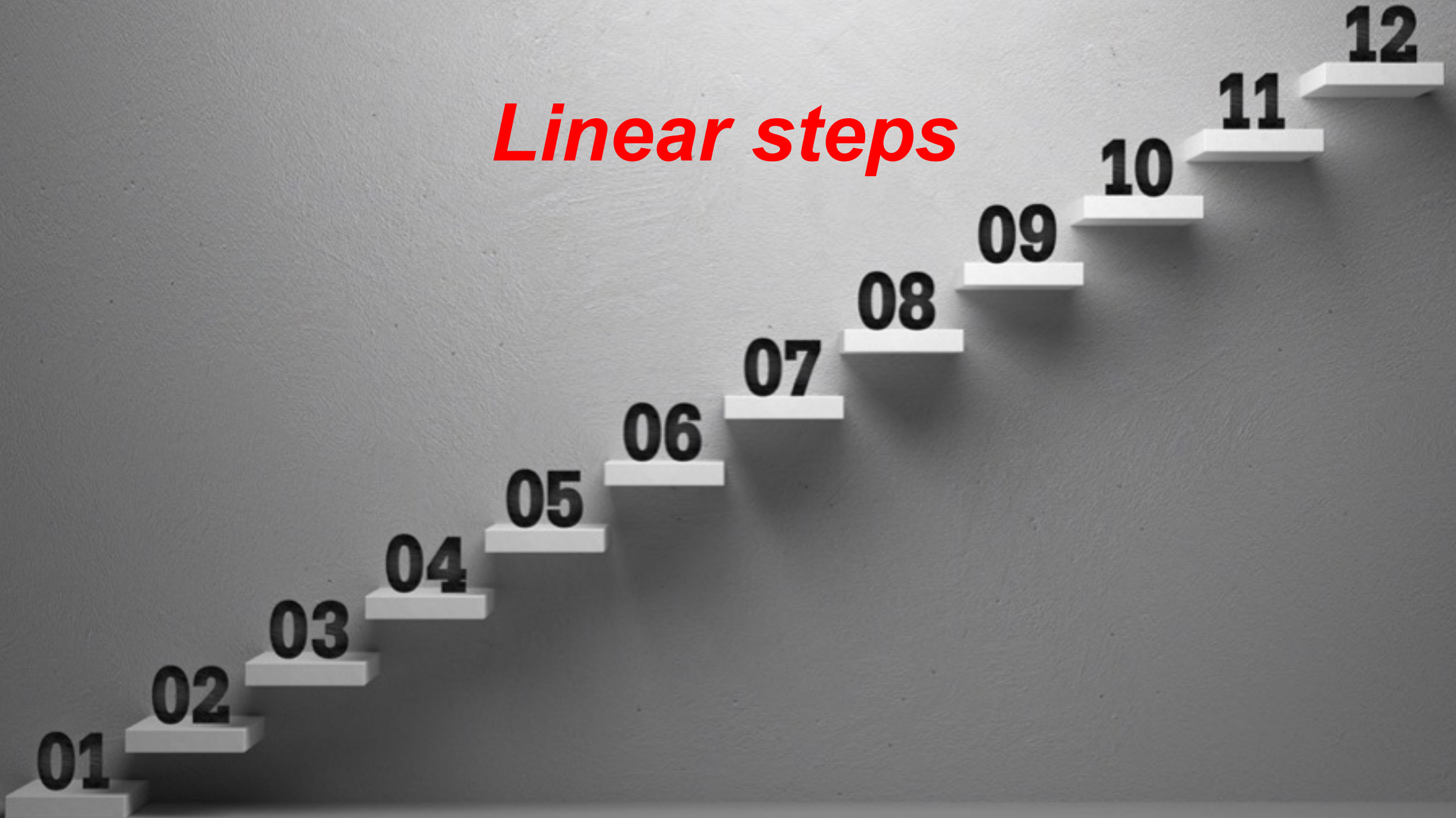


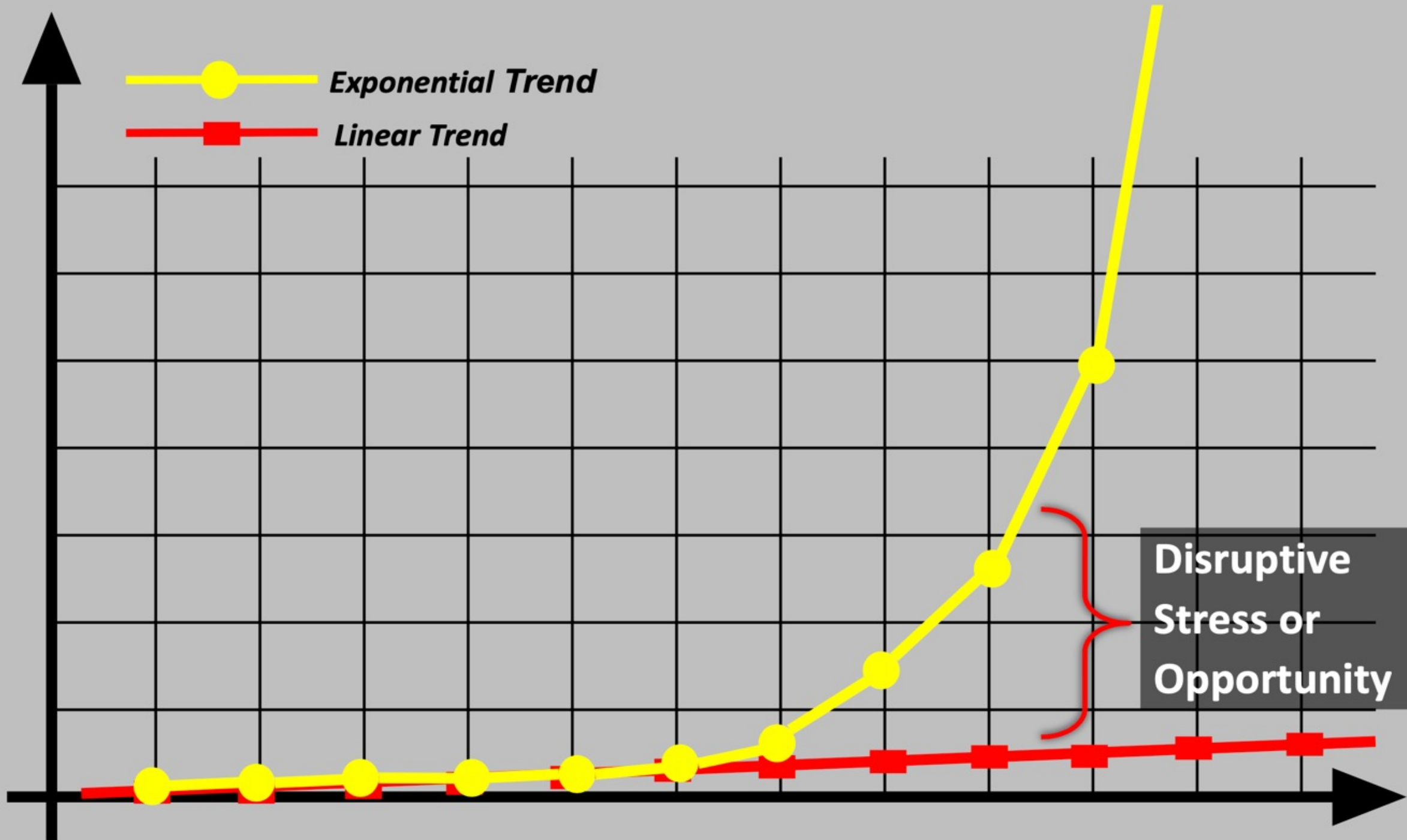
The world's most powerful supercomputer as of April 2023 was Fugaku, which had a peak performance of over 442 petaflops (442 quadrillion floating-point operations per second)



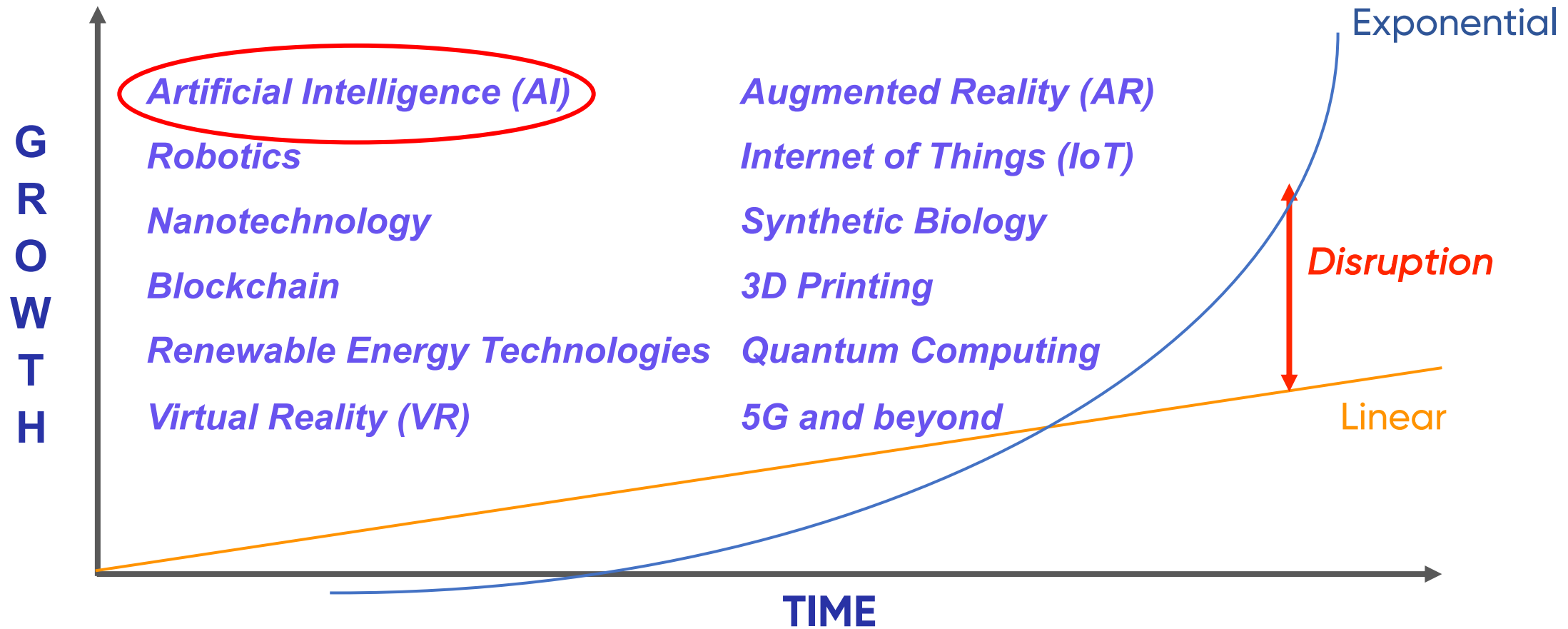
Fugaku was approximately 12.3 billion times faster than the CDC 7600.

Linear steps





Exponential Technologies



AI is becoming as widely used as the internet

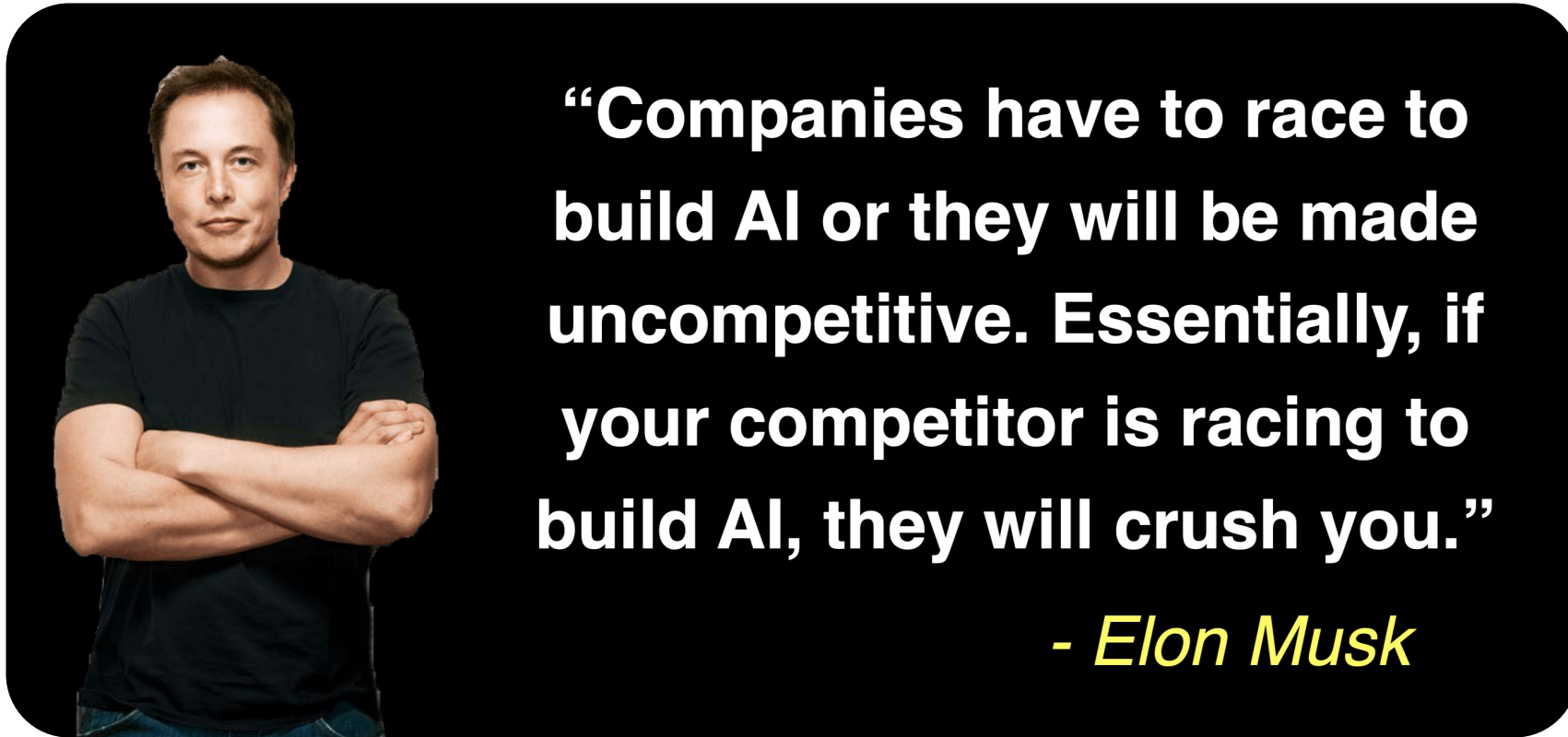
“There will be two kinds of companies at the end of this decade....

... those who are using AI, and those who are out of business.”

-Peter Diamandis-



Some organizations are rapidly expanding AI capabilities



AI has changed our lives, but it is just starting

“Artificial intelligence could have more profound implications for humanity than electricity or fire.”

- *Sundar Pichai, CEO, Alphabet*





Unleashing AI's Potential: A Transformational Challenge

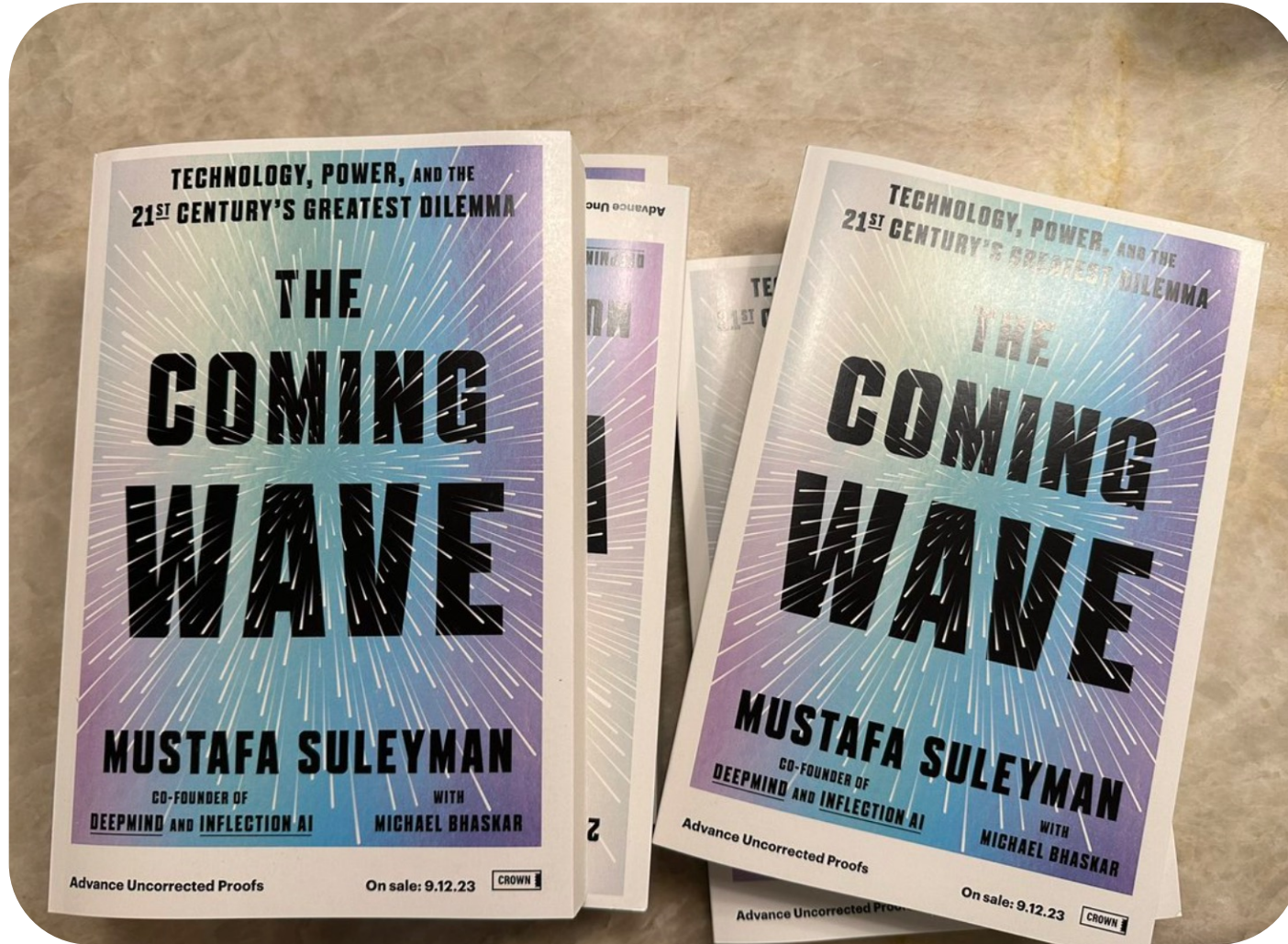
1. Shifts of Unprecedented Magnitude
2. Ethical Imperatives and Moral Hazards
3. Disruption in Every Sector
4. Board Accountability and Liability
5. Cybersecurity Imperatives
6. Talent Acquisition and Development
7. Regulatory Landscape and Public Trust
8. Global Collaboration and Challenges
9. Need to Embrace the Unknown
10. Pursue Sustainable Positive Impacts



**IMPACTS AND IMPLICATIONS FOR
RISK MANAGEMENT**

AI





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Four Features of the Coming Wave

- Hyper-evolution
- Asymmetry
- Omni-use
- Autonomy



**Dilemma = having AI or not having AI –
either could lead to catastrophe or dystopia.**

Just saying no is not a viable option.

**We must pursue a multi-level, multi-faceted,
coordinated framework to manage risks.**





How does Risk Management need to evolve?

**... amidst accelerating and
converging exponential
technologies?**

**Risk Management for AI
AI for Risk Management**

Risk Management for AI (and other exponential technologies)

1. **RECOGNIZE** The Evolving Nature of Risks
2. **DETERMINE** Impact of Exponential Technologies on Risk Management Frameworks
3. **ADDRESS** Ethical Considerations and Bias in AI
4. **TAKE IT UP A LEVEL** re: Data Governance, Data Quality, Privacy and Security:
5. **ANTICIPATE NEW** Regulation and Compliance
6. **DEVELOP** Protocols, Policies, and Values re: AI and Decision-Making





AI and Decision-Making

- **DATA DOESN'T MAKE DECISIONS – LEADERS DO**
- **“CRUNCHY” QUESTIONS STILL MATTER**
- **IT'S ALL ABOUT THE PROMPT**
- **OBJECTIVE FUNCTIONS IN ML**
- **AUTOMATION REQUIRES CONTINUOUS MONITORING
AND IMPROVEMENT**



Need for Trust in Data, Models, and Algorithms

- Black Box – hard to explain models, conclusions, and predictions
- Passive & active resistance by business users
- “Explainability” & Auditability
- Improve “what-if” and counterfactual capabilities
- Enable the Human-AI interface (*Human in the Loop*)



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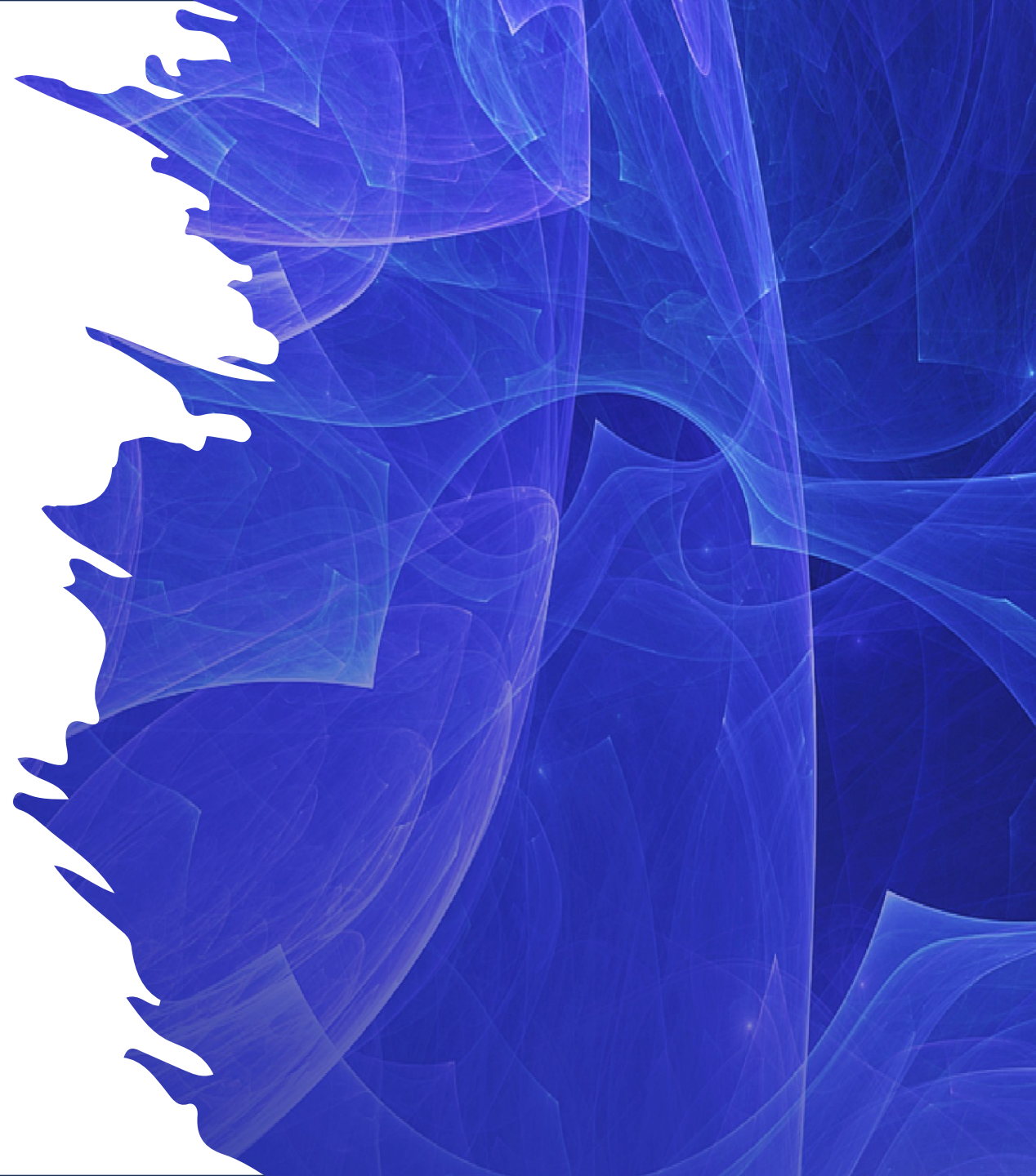


AI for Risk Management

- How can AI improve the identification and understanding of risks?
- What should be the role of AI in mitigating risk?
- What are the opportunities for human and machine collaboration?
- How can AI improve Information Flow and Reporting?

How AI can be used in Risk Management

- Enhanced data analysis
- Predictive analytics
- Real-time monitoring and alerts
- Natural language processing
- Autonomous risk management





How Should You AI Use in Risk Management?

- **Enhanced data analysis:** AI can analyze vast amounts of data quickly and accurately, enabling risk managers to identify patterns, trends, and anomalies that may indicate potential risks.
- **Predictive analytics:** AI can leverage historical data and machine learning algorithms to predict future risks. AI can generate insights that help risk managers make informed decisions by analyzing past incidents and their outcomes.
- **Real-time monitoring and alerts:** AI-powered systems can continuously monitor and analyze data in real-time, providing immediate alerts when risks are detected. This enables risk managers to respond swiftly and take preventive actions.
- **Natural language processing:** AI can analyze unstructured data, such as customer feedback, social media posts, or news articles, to extract valuable insights and identify emerging risks.
- **Autonomous risk management:** Advanced AI systems can automate specific risk management processes, reducing human error and enhancing efficiency.



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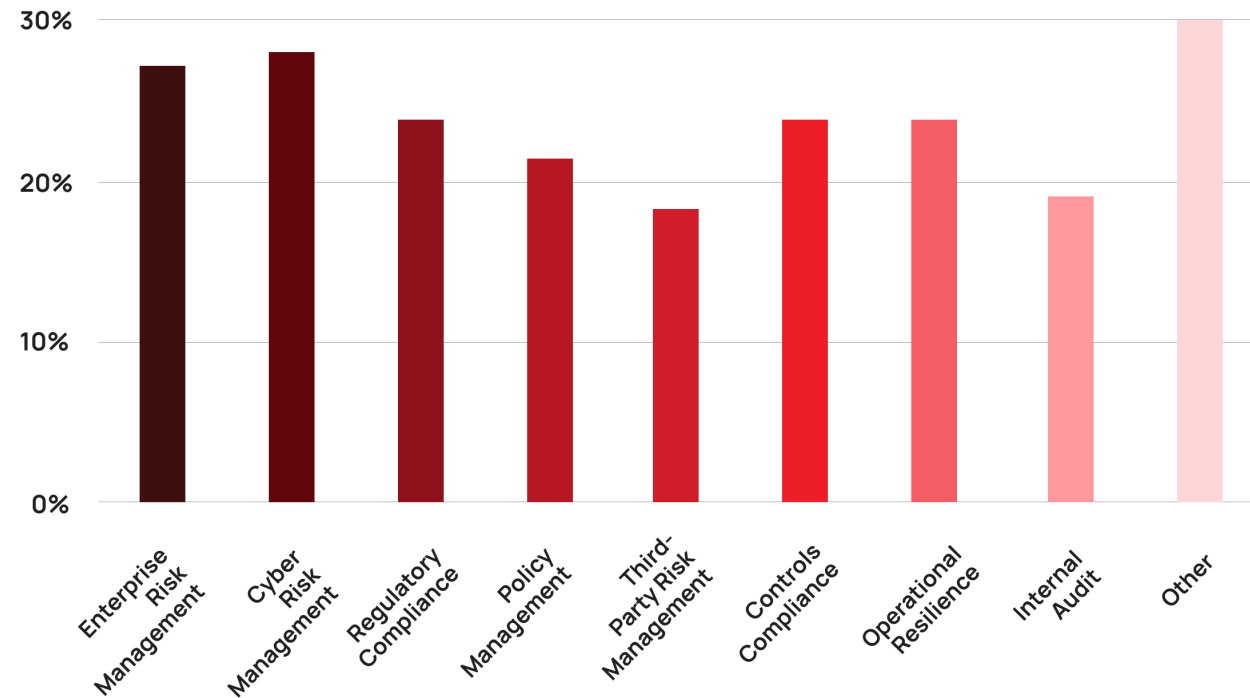


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Use of AI for Risk Management is on the rise

- Valuable use cases cut across the full range of risk and compliance needs
- 21% currently using AI directly or within SaaS for GRC
- 30% more are planning to do so





AI will be useful across all aspects of GRC

The top six ways survey respondents say AI can be very useful:

1. Helping to identify and provide alerts about potential compliance violations
2. Analyzing historical data to find patterns and predict failures
3. Seeing emerging risks by analyzing a variety of internal and external data sources
4. Identifying and analyzing risk patterns or trends in data, events, or actions
5. Flagging anomalies, discrepancies, or potentially troubling patterns
6. Supporting fraud detection





Predictions

- 1) Increased Adoption of AI in Risk Management
- 2) Development of New Risk Management Frameworks and Tools
- 3) Even Greater Focus on Cybersecurity
- 4) Increase in Regulations Specific to AI and Other Exponential Technologies
- 5) Shift in Skill Sets for Risk Managers
- 6) Increased Emphasis of “Humans in the Loop”





**The Future of Risk
Management is
Human-AI collaboration**

Thriving Amidst Exponential Technologies

Anticipate and be resilient

- The future is not entirely uncertain
- Recognize trends
- Distinguish between hard and soft trends
- Distinguish between trends and opinions
- Be future-focused and insight-driven



**Embrace the Opportunities & Manage the Risks
Created by AI and other Exponential
Technologies**

Enjoy the Journey



How to Get Started

- Educate and Build Awareness:**
 - Leadership and Team Education:** Ensure that the leadership team and key personnel understand the basics of AI, its potential impact, and its limitations.
 - Workshops and Training:** Invest in training programs or workshops to build AI literacy across the organization.
- Assess Organizational Readiness:**
 - Current Technology Infrastructure:** Evaluate the existing technology infrastructure to understand what can support AI integration.
 - Skills and Talent:** Assess the current skill levels within the organization and identify gaps that need to be filled for successful AI adoption.
- Define Clear Objectives and Use Cases:**
 - Identify Business Problems:** Determine which business problems AI could effectively address.
 - Set Realistic Goals:** Establish clear, achievable goals for AI initiatives.
- Develop a Data Strategy:**
 - Data Collection and Management:** Ensure robust processes for collecting, storing, and managing data, as high-quality data is critical for AI success.
 - Data Privacy and Security:** Implement strong data privacy and security measures, complying with relevant regulations.
- Foster a Culture of Innovation:**
 - Encourage Experimentation:** Create an environment where experimentation and learning from failures are encouraged.
 - Innovation Mindset:** Promote a culture that is open to new technologies and ways of working.
- Start with Pilot Projects:**
 - Small, Manageable Projects:** Begin with small-scale pilot projects that can demonstrate value without requiring substantial initial investment.
 - Evaluate and Learn:** Use these pilots to learn what works, gather insights, and build the case for further AI adoption.
- Build or Acquire AI Talent:**
 - Training and Upskilling:** Invest in training current employees in AI-related skills.
 - Hiring and Partnerships:** Consider hiring AI experts or collaborating with AI service providers or consultancies.
- Ensure Ethical AI Use:**
 - Develop Ethical Guidelines:** Establish guidelines to ensure AI is used ethically and responsibly.
 - Consider Societal Impact:** Be mindful of the broader societal implications of AI, including job displacement and biases.
- Stay Informed and Agile:**
 - Keep Up with AI Developments:** Stay updated on advancements in AI and adapt strategies as needed.
 - Agile Approach:** Be prepared to pivot strategies in response to new insights and changing market conditions.
- Stakeholder Engagement:**
 - Communicate with Stakeholders:** Keep stakeholders informed about AI initiatives, benefits, and impacts.
 - Gather Feedback:** Actively seek feedback from employees, customers, and other stakeholders.
- Create a Scalable AI Roadmap:**
 - Long-term Vision:** Develop a long-term vision for AI in your organization, with a roadmap that scales up initiatives based on early successes.
- Regulatory Compliance and Risk Management:**
 - Understand Regulations:** Be aware of and compliant with regulations concerning AI in your industry.
 - Risk Assessment:** Regularly assess risks associated with AI deployment and usage.

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