

Technological evolution self-assessment workshop

Vision	Developing	Advanced
Mission, Beliefs, Values	<ul style="list-style-type: none"> - Leadership awareness of basic trends (e.g. virtualization) but generally slow to adopt - Only partial integration of technological evolution-linked considerations in mission, values and/or beliefs - Undeveloped strategic responsiveness to technological evolution's (e.g., obsolescence risk) effects on risk/return objectives - Uncoordinated or limited recognition of risks/opportunities associated with technological evolution at organization or portfolio level 	<ul style="list-style-type: none"> - Senior leadership aware of transformational trends (e.g. the metaverse and decentralization) and promote an innovative culture - Collective recognition and concern with technological change (e.g. speed, complexity, breadth at organization and portfolio levels) - Senior leadership understands risk and return implications of technological evolution on mandate and ability to achieve objectives and constraints - Organization's mission, beliefs and values are adapted for agility and responsiveness to technological evolution (e.g., futurist perspective, innovation budgeter, etc.). - Leadership is committed to addressing technology-related risks and opportunities at organization and portfolio levels, leveraging global connectivity and technological dependencies (e.g. digital infrastructure post-pandemic) - Senior leadership understands cost implications, risks (e.g. cyberattacks and inadequate infrastructure) and opportunities (e.g. cybersecurity funds, artificial intelligence and productivity) associated with technological evolution at organization and portfolio levels
Competitive Advantage	<ul style="list-style-type: none"> - Lack of awareness about how current technology-related organizational processes and investment approaches compare to peers and best practices 	<ul style="list-style-type: none"> - Commitment to leveraging systems, data and capabilities relative to peers and emerging best practices - Understanding and appreciation of unique organizational strengths/weaknesses and consideration of areas in which

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	<ul style="list-style-type: none"> - Across technology-related business systems and investments, inability to differentiate between fads and trends/companies that will prevail 	<ul style="list-style-type: none"> - organization can be differentiated from peers in approach e.g. new teams and seeding of emerging ideas - Capacity to benefit from a long-term business and investment horizon - Highly sophisticated tools

Governance	Developing	Advanced
Accountability of Internal Stakeholders/ Leadership	<ul style="list-style-type: none"> - In the process of learning about technology-related risks to address going forward - Vague alignment of incentives between what teams are responsible for and organization's time horizon - Lack of incentives for employees to innovate and integrate new technologies - Insufficient buy-in to incorporate disruptive innovation into investments 	<ul style="list-style-type: none"> - Stakeholders understand technological evolution-linked risks and opportunities, and strategic planning incorporates responsibilities - Clear alignment of incentives linked to what teams are responsible for and organization's time horizon - Culture recognizes benefits of disruptive innovation and promotes technology-related agility and innovation via compensation and KPIs - Reverse mentoring to engage managers and leadership in training, increasing agility to address technology's pace of change
Policy & Procedures	<ul style="list-style-type: none"> - Policies and procedures include limited references to technology-related investing and associated risks - Team reviews policy and procedures on an ad hoc basis - Procedures include forums for informational sharing 	<ul style="list-style-type: none"> - Organization's policies, guidelines and processes enable effective decision-making for technology-related risk management (e.g. cyberattacks and operational risks) - Investment policies and procedures provide accountability and incentives for investment team's pursuit of new investments that benefit from technological evolution - Team regularly reviews policy and procedures - Procedures include forums for information for sharing and collaboration
Trend-Specific Staff (and research capability)	<ul style="list-style-type: none"> - IT team has neither integrated with investment team nor with organization's technological evolution-related processes - No specialized professionals that can integrate technology-linked opportunities into investments 	<ul style="list-style-type: none"> - Diverse staff (e.g. data scientists, disruptive technology specialists, head of innovation and sector/industry analysts) collaborate to identify and research technological evolution-related investments opportunities - Specialists (e.g. Chief Technology Officer) that can address organization-related technological risks

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	<ul style="list-style-type: none"> - Training for staff and portfolio companies (if relevant) on data security, compliance and business continuity. 	<ul style="list-style-type: none"> - Awareness of required expertise and resources; adequate budget to acquire such talent. - Organization is cognitively and physically diverse; culture promotes exploration, development, testing, and integration of data analytics and technologies that enhance risk assessment, due diligence, deal evaluation and monitoring

Implementation	Developing	Advanced
Strategic/ Scenario Analysis	<ul style="list-style-type: none"> - Limited or no analysis of technological disruption's impact on the portfolio or on individual investments 	<ul style="list-style-type: none"> - Balanced assessment of scenario comprehensiveness, plausibility and probability - Forward-looking scenario and sensitivity analyses of key value drivers especially for more disruptive technologies - Ongoing team assessments focused on resilience, adaptability and capability for technological adoption and innovation pre-investment
Benchmarks/ Target Metrics	<ul style="list-style-type: none"> - Use of generic industry benchmark to assess and monitor performance - Limited to no consideration of disruptive innovation when deriving strategic asset allocation and KPIs 	<ul style="list-style-type: none"> - Board and management collaborate to define relevant benchmarks that achieve trend-related strategic objectives e.g. customized benchmark that moves beyond traditional market capitalization and style-focused considerations - Benchmark and monitoring metrics adjusted to capture effects of disruptive innovation or other technology-related considerations
Portfolio Integration	<ul style="list-style-type: none"> - Limited attention to benchmarking considerations for strategically oriented technology-related investments, beyond traditional sector/industry benchmarks and risk metrics - Siloed portfolio strategy (e.g. allocations to equities, bonds and real assets as opposed to themes e.g. technological evolution) 	<ul style="list-style-type: none"> - Use of illiquid exposures to invest earlier in companies exposed to high degree of technological evolution (e.g. venture capital or growth equity) - Recognize potential benefit of seeding small exposures and building expertise and exposure gradually to accelerate competency and speed of subsequent investments, positioning portfolio to benefit from tailwinds (e.g. biotechnology and renewable energy) - Understand and adopt new technology (e.g. blockchain, generative artificial intelligence, etc.) to help improve transaction execution e.g. speed, cost and security - Advance data and analytics capabilities across investment platforms

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Engagement	<ul style="list-style-type: none"> - Passive investors or, if active, limited to no engagement with management on innovation and technology-related opportunities - Engagement often reactive or dissenting as opposed to proactive with portfolio companies and/or managers 	<ul style="list-style-type: none"> - Engage with portfolio companies and managers to help assess competencies and improve innovation. - Liaise with management to uncover new technology-related opportunities. - Assess investment manager analytics (e.g. use of non-traditional datasets and artificial intelligence augmentation)
Measurement/ Monitoring	<ul style="list-style-type: none"> - Exploring potential use of artificial intelligence and data providers that enable the capture of more meaningful data for investment and portfolio decision making - Periodically track and measure technological evolution's effects on projected returns and risks 	<ul style="list-style-type: none"> - Use integrated risk information management technology, artificial intelligence and natural language processing to enable a more efficient collection and analysis of risk-related data to generate insights and support enhanced decision-making (e.g. business process improvement, ESG factor monitoring and global artificial intelligence risk screening) - Understand and report measurement implications on commercial objectives to stakeholders and key decision makers

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