Deep Dive into Cloud and Data

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Data, Generative Al, Cloud

Deep(ish) Dive

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Key Challenges to Leveraging Data

82% have not been able to remove data silos²

40% cite distribution and number of data sources impacting outcomes³

37% cite data type variety as a complexity impacting outcomes³

41% cite that data is changing faster than they can keep up with⁴

31% cite data technology debt³

24% do not trust their data⁵

29% have issues with data quality⁵



²Source: Future Enterprise Resiliency & Spending Survey - Wave 11, IDC, December, 2022, N=840
³Source: IDC Data Management Survey, 2023, N=1021
⁴Source: Global Data Valuation Survey, IDC, 2023, N=1024
⁵Source: Future Enterprise Resiliency & Spending Survey Wave 2, IDC, March, 2023, N = 952



Data Architecting for Enterprise Intelligence Success







Four Planes of Enterprise Intelligence Architecture



- Enterprise Intelligence Architecture (EIA) is a conceptual representation of attributes, technologies, and functionality enabling execution of Enterprise Intelligence strategy
- Each plane is aligned with personas
 - **DBAs** and data architects operate in the **data plane**;
 - Data engineers and **data stewards** in the data **control plane**;
 - **Data scientists** and data analysts in the data **analysis plane**;
 - Planners, **business** decision makers, and even automated decisioning systems in the **decisioning plane**
- Enterprises should identify missing components of their EIA



Investing in Data Management and ROI

Where is the money coming from?

55% Centralized (i.e., through a centralized, enterprise-level IT budget)

45% De-centralized (i.e., individual units, departments, groups)

72% from IT groups28% from Business groups

What is the return?

Financial Improvement +8.4%

+4.5% improvement with a low level of data intelligence

Operational Improvement +10.7%

+6.9% improvement with a low level of data intelligence

35% reported significant data management improvements

• 8% with low levels of data intelligence reported significant improvements



Source: IDC Data Management Survey, 2023, N=1021



Generative AI (gAI)





How to Prepare for and Embrace Generative Al







Al Governance Starts at the Executive Level

Chief Financial Officer

• Al cost and financial risk

Chief Marketing Office

• Al customer and brand charters

Chief Data Officer

• Evolution of Al governance charter and data governance

Chief Legal and Compliance/Risk Officer

• Al legal and risk factors for the organization

Chief Executive Officer

 The Al governance charter and organizational accountability

Chief Human Resources Office

• The creation of AI employee policy and charter

CIO/CTO

The evolution of adversarial robustness

Poor AI governance increases the risk of unintended, negative consequences and is complicated by shifting regulations





Preparing for Change: Baseline-setting to Drive gAl

01 Centralized, cross-functional (LOB/IT), gAl platform team

- Develop and maintain a platform service where approved generative Al models can be provisioned on demand for use by product and application teams
- Define protocols for how generative Al models integrate with internal systems, enterprise applications and tools, and develops and implements standardized approaches to manage risk, such as responsible Al frameworks

02 Roles - staff with right skills

- Senior technical leader as GM
- Data engineers to build pipelines
- Data/ML scientists models and prompts; fine tune models with new data sources
- **Prompt engineers** to develop, refine and optimize Al generated text prompts
- MLOps manage deployment and monitoring
- Al ethicists develop ethical guidelines and policies for Al projects
- Al risk experts manage issues such as data leakage, access controls, output accuracy
- LOB personas provide business process and rules guidance
- Al champions as catalysts to integrate Al

03 Hiring/upskilling for a culture of innovation

- Rethink talent management/retention
- Adapt academy models to provide upskilling by role, proficiency and business goals
- Provide training and corresponding certifications to both technical and non-technical talent
- Ensure every knowledge worker has basic Al skills
- Run Al hackathons, ideation workshops
- Run Al summits





Prioritizing gAI Opportunities

Balancing risk, value, complexity, and data quality









We are Over-Spending on Cloud

A majority of clients report over-spending on their Cloud budget

Is your organization currently spending more on Cloud than you budgeted?



- By 2024, IDC estimates 54% of IT spend will be on Cloud
- Clients report Cloud overspend is 30%

My biggest issue right now: explaining the spiraling Cloud costs to the CEO, the CFO and Procurement teams

– CIO, Tier 1 Global Bank







FinOps Principles

A common understanding of FinOps principles drives success

- Business and IT teams need to collaborate
- Decisions are driven by business value of Cloud
- Everyone takes ownership and accountability of their Cloud usage
- FinOps reports should be accessible and timely
- A centralized team drives FinOps
- Take advantage of the variable cost model of the Cloud



Source: FinOps Foundation



Managing Cloud Value

85% of Fortune 500 companies have FinOps programs

Inform

- Setting tags (descriptive metadata)
- Reporting spending visibility and transparency
- Budgeting and forecasting
- Cost allocation chargeback/showbacks
- Assembling a cross-disciplinary team



Optimize

- ROI
- Rightsizing
- Workload placement
- Rate and discount optimization
- Culture and ownership
- Minimizing waste and unused resources
- Identifying tools and software
- Value versus cost

Operate

- Automate
- Centralized billing
- Defined control and governance; embed FinOps in processes and operations
- Communicate optimizations and spend patterns to inform stakeholders





Creating a FinOps Organization for Cloud Value

Left-shift as much as possible in building a FinOps organization. But it's never too late

FinOps Practitioner Lead: Jack of all trades (knowledge of Finance, IT, Ops, Dev). Evangelist who drives agenda company-wide

Cloud Engineering, Infrastructure Operations: Architect cost effective Cloud infrastructure

DevOps Manager: Understand how code changes and decisions impact costs

Procurement: Contractual requirements, relationships. Cost comparisons between hyperscalers

Finance: Budget versus actual spending, proper allocation of costs, forecasting

Line of Business Product Manager: Supply and demand, how BU requirements impact costs

Executive Sponsor: C-level to empowering team to meet overall business objectives





Cloud Pain Points Addressed

Roles in the organization coordinate to address Cloud points of pain

FinOps Response

Pain Point	FinOps	Engineering	Business	Finance
Drive engineering action	Inform opportunities	Optimize, mitigative action	Set priorities	Set objectives
Accurate forecasting of Cloud spend	Optimize	Provide input	Provide plans	Collaborate
Organizational adoption of FinOps	Communicate FinOps "story"	Training	Training	Training
Enabling FinOps automation	Define business case	Automate operations	Automate reporting	Automate integration
Reducing Cloud waste and unused resources	Inform and optimize	Operate with FinOps standards	Agree on standards	Set objectives
Aligning finance and procurement	CIO leadership			CFO leadership
Full allocation of Cloud	Develop showback	Operate with FinOps standards	Dashboards	Develop chargeback
Allocating shared costs	Develop showback	Operate with FinOps standards	Dashboards	Develop chargeback
Multi-Cloud cost reporting	Develop showback	Operate with FinOps standards	Dashboards	Develop chargeback
Hybrid Cloud cost reporting	Develop showback	Operate with FinOps standards	Dashboards	Develop chargeback



Source: FinOps Foundation, 2022

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Cloud Pain Points Addressed

FinOps primary capabilities are supported by contributions from the business to drive value

FinOps Response

Priority Capabilities	Business Contribution	Business Benefit	
Cost allocation (tags, labels, hierarchy)	Defining relevant structure to business alignment	cture to business alignment Cost transparency	
Data analysis and showback	Define business-relevant reporting standards	Informed usage incurs cost	
Manage commitment-based resources	Spending controls	Appropriate cost to business value	
Manage anomalies	Determine	Appropriate cost to business value	
Forecasting	Cloud investment planning and priorities	Clear options and better decisions	
Manage shared costs	Defines clear cost allocation methodology	Informed usage incurs cost	
Budget management	ROI, evaluation parameters	Optimal spend versus innovation balance	
Resource utilization and rightsizing	Spending controls	Lower costs	
Establish FinOps culture	Align to organizational objectives Corporate objectives met		
Workload management and automation	Support business-aligned management/automation Improved decision making on value		
Measure unit costs	Inform on meaningful business measurements	Enables benchmarking and KPIs	
Chargeback and IT finance integration	Agree and support models	Informed usage incurs cost	



Source: FinOps Foundation, 2022



What to Take Away

Cloud, data, and generative AI are inextricably linked

You can't fix by analysis what you have bungled by design

• Get your data house in order

Successful leverage (business value) of AI and gAI requires solid foundations

Good data, transparent, well-managed Cloud, clear, articulated policies

Generative AI is a business transformer

 Don't treat it like just another IT project. Engage the C-suite and be mindful of its risks

FinOps value outweighs the effort to build, run, and staff the organization

• Equips the business with tools to evaluate the value of their Cloud decisions

Automation of Cloud management drives cost savings and value







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CoreStack | Cloud with Confidence

Robert Ford Chief Strategy Officer

Seasoned CEO, CSO, CIO, and Engineering Lead who has personally driven large enterprise digital transformations. Works alongside customer executives and technical teams to share experiences and strategies to drive confidence in the cloud, unleash innovation, and enable customers to go faster and further realizing their cloud ambitions.

The Ford Consultancy Group | Northwest University | Microsoft EMEA & CORP British Army | Royal Green Jackets

Columbia University NY | National University Singapore

CORESTACK | Cloud with Confidence



Cloud Governance The New Cloud Frontier To Master

What is cloud governance?



What matters most?

•

What is cloud governance?



Cloud Governance | Cloud with Confidence

Cloud

MTCO2 Automation Compliance Security Spend with Architecture Posture Tagging Policy Visibility $\left(\right)$

Control | Remain on posture Ownership | Drive accountability & action Notification | Provide proactive alerts Fidelity | Trust (and verify) Intelligence | Mainstream AlOps Discovery | Always current & complete Expediency In (ahead of) the moment NextGen | Front the innovation curve Compliance | Stay continuously compliant Efficacy | Cloud with Confidence



Why the new frontier?



Cloud Governance | The Cloud Frontier to Master



Cloud Governance | The Cloud Frontier to Master

Cloud Management Spectrum (Doing Things Right)



Hyperscaler Portals + Consoles (crawl) CMP Products Home-Grown (walk)

Reactive Siloed Tactical Technical Copilot NextGen Cloud Governance (Doing The Right Things Right)



Cloud Governance Platform | Integrated, Automated, Intelligent

(Run | Fly)

Prescriptive Holistic Strategic Adaptive Autopilot

CORESTA

What matters most?



Cloud Governance | Platform Matters



Extract | Discover, capture and derive greater cloud resource perspective Enhance | Create a holistic single system of intelligence for all cloud resources Enrich | Deepen AI capabilities and insights with anonymized governance data corpus

Cloud Governance | Mainstream AI Matters

"Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!" Lewis Carrol

Generative AI Creation

- Policy & Rule Creation
- Cost Modelling
- Security Simulation
- Richer Discovery
- Configuration Advice

Cognitive Al Experience

- Conversational Governance
- Agents | Chatbots
- Advanced Analytics

Applied AI Automation

- Forecasting Benchmarking Cost Optimization Remediation
- Anomaly detection

Domain Al Foundation | Data

- Data Platform | CR360
- **Reach/Integration**
- DQ (ROT + Bias)

Control | Remain on posture 0 Ownership | Drive accountability & action N Notification | Provide proactive alerts F Fidelity | Trust (and verify) Intelligence | Mainstream AlOps D Discovery | Always current & complete Ε Expediency In (ahead of) the moment N NextGen Front the innovation curve Compliance | Stay continuously compliant Efficacy | Cloud with Confidence

Cloud Governance | Cloud Positioning Matters



Cloud Governance | Key Take Aways

- 1. Ensure Cloud Governance gives your organization the CONFIDENCE to go further, faster
- 2. Cloud Governance well begun; DX half done | Do the right things right
- 3. Position the Cloud correctly | All roads digital lead to, from and ride on the Cloud
- 4. Focus on what matters most | Platform (Data), Mainstream AI, Cloud Governance
- 5. Be Vision-Led and Priority-Driven, and as CIO's, boldly lead!





