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Unblocking Blockchain Adoption – A Prioritization Framework for Business Processes

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Introduction

Blockchain is rapidly emerging as a disruptive technology in domains much beyond its original area of application, the cryptocurrency named bitcoin. There is high interest among enterprises on how blockchain can be leveraged in business processes to attain the key benefits of this technology – disintermediation & trustless exchange, transparency & immutability, and quicker & lower cost transactions. However, many enterprises are also understandably wary of the many risks involved – nascency of the technology, uncertainty in the regulatory landscape, requirement of vast amounts of computing power, potential privacy & security concerns, and high initial capital costs.

At this juncture, enterprises should tread cautiously instead of rushing blindly ahead, prompted by the hype around blockchain. A partially-informed decision can result in costly mistakes that can potentially destroy organizational appetite for this powerful technology. On the other hand, they should also not sit on the fence long enough to lose the opportunity of gaining a competitive advantage by deploying blockchain. Everest Group's blockchain prioritization framework is intended to assist enterprises as they navigate the tricky terrain of blockchain in business processes.

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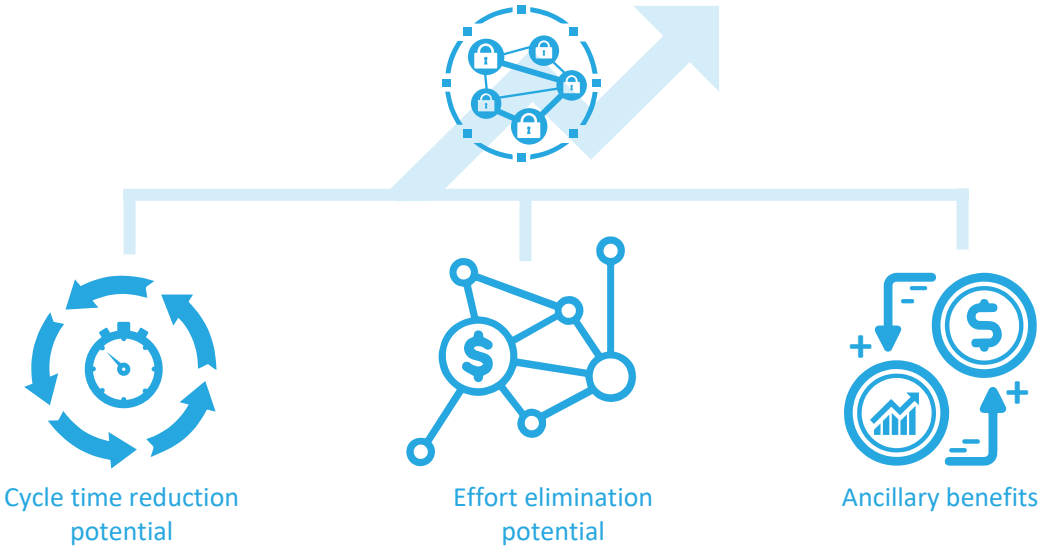
The imperative for a blockchain prioritization framework for business processes

As they embark on the journey of blockchain adoption, enterprises should recognize that the popular narrative that paints the entire universe with a broad brush is misleading in the matter of the potential for blockchain application in business processes. Everest Group has created a conceptual prioritization framework that assesses the likelihood of blockchain adoption within business processes along two key dimensions – potential business impact and ease of adoption (see Exhibit 1). **The key factors that should be considered to assess potential business impact of blockchain are:**



- Cycle time reduction potential – Potential business benefit due to reduction in time taken to complete a process end-to-end after the implementation of a blockchain-based solution
- Effort elimination potential – Reduction/elimination of effort required due to lower transaction friction in a blockchain construct. Transaction friction is typically a function of number of mistrustful ecosystem players, volume & frequency of transactions, and nature of transactions (one-to-one, one-to-many, and many-to-many)
- Ancillary benefits – Additional gains in ancillary activities due to blockchain adoption. For example, built-in immutable trails in a blockchain would lead to a reduction in the effort involved in an audit exercise

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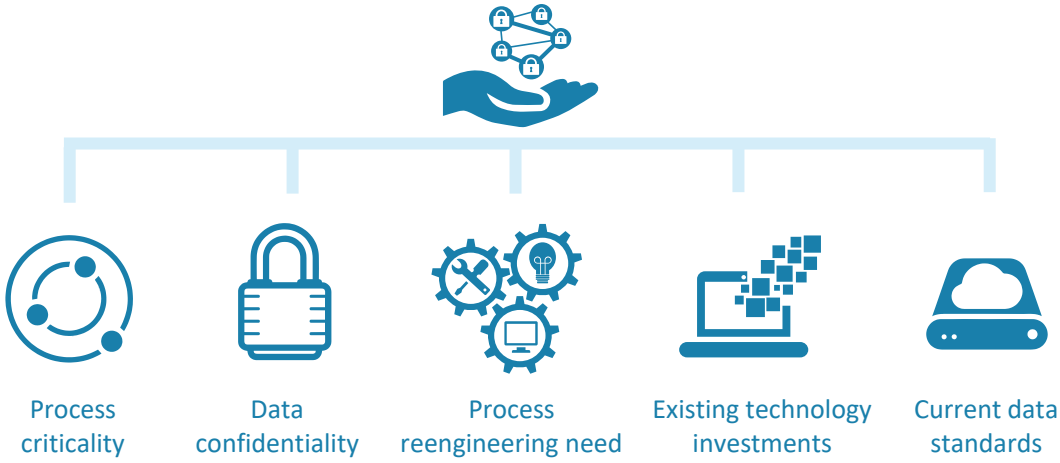
The key factors that should be considered to determine the ease of adoption of blockchain are:

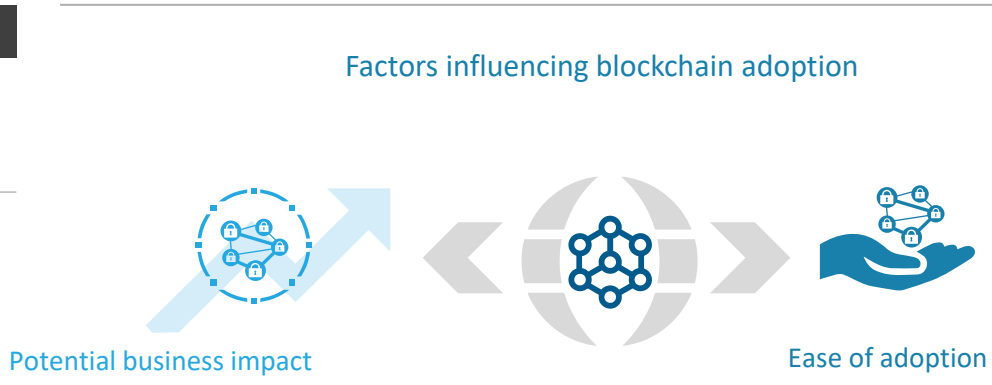


- Process criticality – Perceived criticality of the process (and associated risk perception) by the business. Typically, core processes are considered more critical than others
- Data confidentiality – Confidentiality of the data shared within the blockchain ecosystem
- Process reengineering need – Quantum of change required in the business process to align it to a blockchain-based environment
- Existing technology investments – Sunk cost in terms of existing software and hardware costs for the underlying business process
- Current data standards – The extent to which entities or participants currently use a common data standard to share information

EXHIBIT 1

Key factors influencing adoption of blockchain – potential business impact and ease of adoption

Source: Everest Group (2017)



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For this exercise, we selected business processes in four broad areas representing both industry-specific and corporate functions – Banking and Financial Services (BFS), Finance and Accounting (F&A), healthcare, and insurance (see Appendix for process definitions). Each business process was rated across each of these factors using the scoring guideline shown in Exhibit 2.

EXHIBIT 2

Scoring based on potential to adopt blockchain

Source: Everest Group (2017)

Potential business impact | Ease of adoption | Increasing score to indicate increasing applicability of blockchain

Cycle time reduction potential	Low potential to derive additional benefits as a result of blockchain		High cycle time reduction and/or the resultant business benefit
Effort elimination potential	Low potential to eliminate effort as a result of blockchain adoption		High potential to derive additional benefits
Additional benefits	Low potential to derive additional benefits as a result of blockchain		High potential to derive additional benefits
Process criticality	Core process		Non-core process
Data confidentiality	Major barriers to sharing of data		Low barriers to sharing of data
Process reengineering need	Major process redesign required		Can lift and shift process into blockchain
Existing technology investments	High existing tech investments		No major existing technology investments
Current data standards	Disparate data standards		Universal data standard in vogue

Based on these scores (each factor was given suitable weightage), business processes were classified into four categories – opportunistic, ideal, avoidable, and selective. Their typical characteristics and recommended actions were also identified (see Exhibit 3) to create Everest Group's blockchain prioritization framework for business processes.

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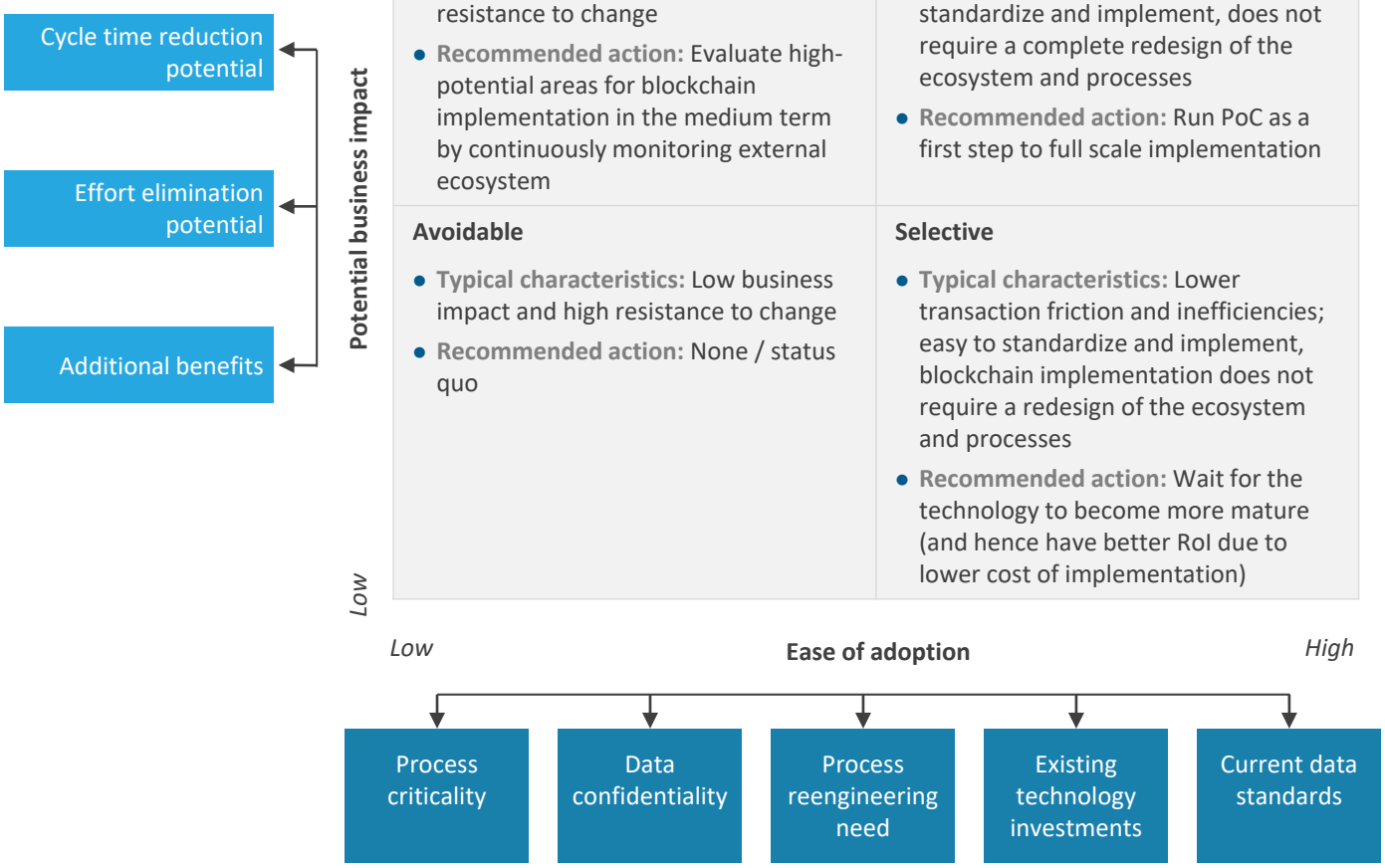
EXHIBIT 3

Everest Group's blockchain prioritization framework for business processes

Source: Everest Group (2017)



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Applying the blockchain prioritization framework for business processes

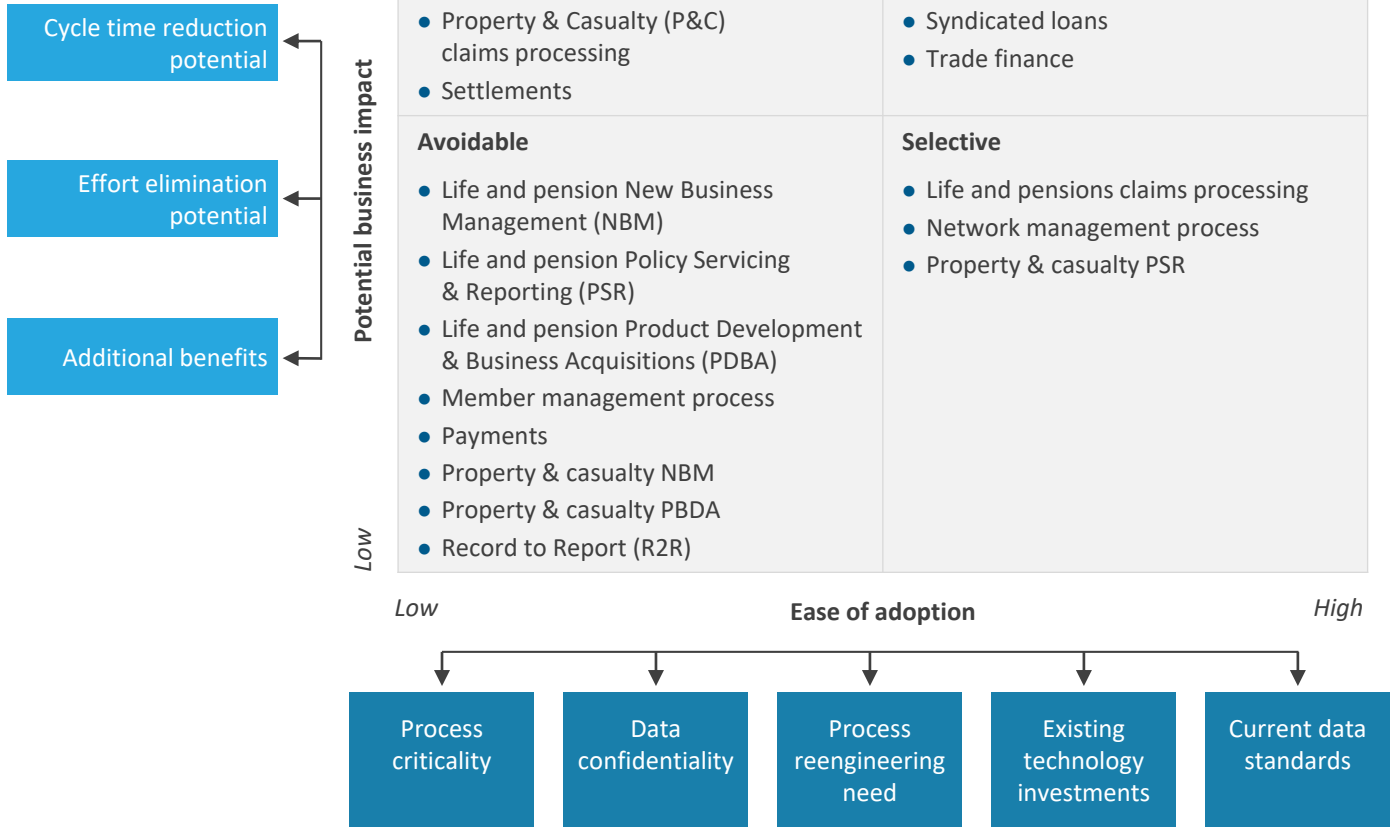
After applying Everest Group's blockchain prioritization framework, the following picture emerged:

EXHIBIT 4

Business processes categorized using the prioritization framework

Source: Everest Group (2017)

Note: Processes within each quadrant are listed in no particular order



As expected, many high-priority use cases ("ideals") emerged from within the BFS sector, wherein establishing trust is a time consuming and high friction process due to the regulatory constraints, compliance & fraud risks, and the sheer number of intermediaries involved. Consequently, for these processes, significant business benefits can be achieved with relatively simple, non-disruptive blockchain implementations. On the other hand, processes such as life and pensions claims processing ("selective") while amenable to blockchain solutions, does not necessarily provide the same quantum of business benefits due to the lower levels of friction (addressable through blockchain) in the current setup. What may also be important is how the technology itself evolves to influence these processes. For instance, most implementations / use cases of blockchain in the BFSI world currently employ closed or permissioned ledgers, though original thought-starters for

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bitcoin and blockchain had envisioned usage of open ledgers. A move towards the utilization of open ledgers may make some processes move toward becoming "ideals" as well.

Some of the other processes such as Procure-to-Pay (P2P) ("opportunistic"), with inherently high friction process flows and multiple intermediaries (banks, vendors, and multiple enterprise departments in the case of P2P) would also benefit greatly from blockchain constructs. However, due to multiple barriers to adoption (data standard issues, potential disintermediation, etc.), there may be a lack of willingness to exploit blockchain's potential in these processes. It is important to note that this does not mean that we will not see Proof of Concepts (PoCs) in these process areas in the future. Given the rapidly evolving blockchain landscape, we could indeed see any number of processes in the "opportunistic" quadrant moving towards the "ideal" quadrant. Disruptive process reimagination (typically by startups and parties that are external to the ecosystem) could also result in a reclassification of some of the processes in the "avoidable" and "selective" quadrants to "ideal" over time. As with most cutting-edge technologies, the boundaries of business applications will consistently be tested by innovative organizations.

Conclusion

One could envision a future in which the impact of blockchain could rival that of the internet or the mobile revolution. Standing today at the threshold of this potential revolution, we find that a significant proportion of enterprises fall into two groups on extreme and opposite ends of the spectrum – the naysayers (growing smaller in number as the technology matures) and the blind believers. The naysayers of course run the risk of being completely left behind. On the other hand, among the blind believers, there seems to be a mad rush to run blockchain PoCs in anything and everything that requires a database. Many of these enterprises will end up with impressive-sounding blockchain implementations that deliver little to no benefit, while causing a significant draining of enterprise resources. Even among the middle-of-the-spectrum enterprises (which constitutes the majority), there appears to be considerable lack of clarity on how to approach the blockchain animal. Enterprises would be well-advised to use a structured prioritization framework, such as the one proposed in this paper, as a starting point in their journey of blockchain adoption. They can utilize it to avoid making investments in low-potential process areas and to catalyze action in the organization, if they are still waiting to take the plunge.

Everest Group will continue to keep a close watch on blockchain and update the framework as the technology matures. As we continue to explore this exciting new technology and its impact, we will publish specific and deep-dive analyses on the applicability of blockchain across multiple business process areas such as F&A, insurance and healthcare.

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Appendix

Business Process Area	Process Name	Description
Banking and Financial Services	Corporate action	Activities supporting a corporate action (usually approved by the board of directors) that brings material change to a company and affects its stakeholders. Examples of corporate action include cash dividends, stock splits, and mergers & acquisitions
	Know-Your-Customer (KYC)	KYC refers to the due diligence processes carried out by banks to identify and verify the identity of its clients. They are required by regulatory guidelines and help banks understand their customers better
	Syndicated loans	Management of loans offered by a group or syndicate of borrowers to a large single borrower. These loans are used to spread risk among multiple lenders who may be too small to offer the loan individually
	Trade finance	Trade finance is a set of activities that helps mitigate supply risk for the importer and payment risk for the exporter in domestic and international trade transactions. Activities include issuing letters of credit and bank guarantees
	Settlement	Administrative activities that enable/support the change in ownership of a security from a seller to a buyer, which usually takes place within a stipulated period after the transaction date
	Payments	Consists of processes that support the transfer of one financial asset in exchange for another

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Business Process Area	Process Name	Description
Finance and Accounting	Procure-to-Pay (P2P)	P2P encompasses activities that are primarily vendor-facing. The major subactivities within the P2P value chain include requisition-to-PO, invoice processing, Accounts Payable (AP), and Travel & Expense (T&E). This function relates to creating requests for indirect products/services consumed by enterprises, and the associated payment activities
	Order-to-Cash (O2C)	O2C consists of the customer-facing processes of enterprises. It consists of activities such as Accounts Receivable (AR), aging & collections, dispute & deduction management, and billing & order management. This function covers the entire lifecycle from placing of an order by a customer to the final payment collection for the same
	Record-to-Read (R2R)	R2R primarily relates to the internal accounting and budgeting & reporting process of an organization. Some of the major subprocesses include accounting & taxation, reporting & planning, and regulatory & compliance

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Business Process Area	Process Name	Description
Healthcare and Life Sciences	Claims processing	Administration of claims and associated legal and regulatory activities. Includes processes such as initial claims processing, claims review, claims adjudication, claims disbursement, fraud detection & management, claims litigation, claims recovery & subrogation, and coordination of benefits (largely payment integrity)
	Member management	Identification of customers' risks & onboarding, administration of existing policies, and managing of records. Includes the following processes — enrollment, eligibility, handling of endorsements & renewals, risk identification & assessment, records management & HIX support, and billing & collections
	Care management	Care and wellness-related activities focused towards reducing care costs and improving quality of care. Processes included are disease management, utilization management, and population health management
	Network management	Managing insurance network and related activities to ensure proper functioning. Includes processes such as provider management, provider credentialing, provider contract management, support for Pharmacy Benefit Managers (PBMs) & Third-Party Administrators (TPAs), and records management

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Business Process Area	Process Name	Description
Insurance: Life and Pensions & Property and Casualty	Product Development & Business Acquisitions (PDBA)	Designing of insurance products (policies) and management of channels to acquire business. Includes actuarial data processing, actuarial analysis & review, proposals & illustrations, agent & broker management, regulatory & other compliance, and product testing
	New Business Management (NBM)	Identification of customers' risks and onboarding. Includes initial policy creation, statistical modeling, underwriting, initial premium collection & accounting, policy issuance, and member enrollment & management
	Policy Servicing & Reporting (PSR)	Servicing and updating existing policies and managing records. Includes policy servicing – financial, policy servicing – non-financial, policy records management, and eligibility requirement & verification
	Claims processing	Administration of claims and associated legal and regulatory activities. Includes initial claims processing, claims management, claims review & investigation, claims adjudication, claims adjustment & disbursements, fraud detection & management, claims litigation & recovery/subrogation, and regulatory & other compliance

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