

Report On

Investigate and implement digital tools and technology to streamline the procurement process. Evaluate the impact of E-procurement, and automation on overall procurement and supply chain efficiency

By

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An internship report is submitted to the BRAC Institute of Governance and Development (BIGD) in partial fulfillment of the requirements for the degree of Master in Procurement and Supply Management

BRAC Institute of Governance and Development

BRAC University

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Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at Brac University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

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Letter of Transmittal

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Subject: Submission of Report/Practicum Titled "Investigate and implement digital tools and technology to streamline the procurement process. Evaluate the impact of E-procurement, and automation on overall procurement and supply chain efficiency. "

Dear Sir,

I am grateful to submit my report/practicum on "Investigate and implement digital tools and technology to streamline the procurement process. Evaluate the impact of E-procurement, and automation on overall procurement and supply chain efficiency." as a partial requirement to fulfill the degree of Masters in Procurement and Supply Management.

I have attempted my best to finish the report with the essential data and recommended proposition in a significant compact and comprehensive manner as possible.

I trust that the report will meet the desires.

Sincerely yours,

Naimul Hassan
Student ID: 22282003
BRAC Business School
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Date: December, 2024

Non-Disclosure Agreement

This agreement is made and entered into by and between the Bangladesh Police Department and the undersigned student Addl. DIG Naimul Hassan, Student ID: 22282003 Director, Investigation & Forensic wing, RAB Forces HQ, Dhaka. As I am currently working at this organization, I have access to the Organization's confidential information. I agree that I will keep all the information strictly confidential and not share it with anyone outside the organization.

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Acknowledgment

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I am obliged to utilize my learning of MPSM to cater to value addition and a sustainable world where Digital and E-procurement shall create a saner world.

Finally, I place my utmost and sublime satisfaction to Almighty Allah by saying “Alhamdulillah” to reach this stage of learning.

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List of Acronyms

1. BB- Bangladesh Bank
2. INF- Institute for Inclusive Finance.
3. BBS- Bangladesh Bureau of Statistics
4. E- Procurement- Electronic Procurement.
5. AI- Artificial Intelligence
6. IT- Information Technology
7. DTC- Direct to Consumer
8. DB- Digital Bank
9. OTC- Over the Counter
10. CDM- Cash Deposit Machine.
11. CRM- Customer Relationship Management
12. B2B- Business to Business
13. SAP- System Application and Products
14. S2C- Source to Contract
15. P2P- Procure to Pay
16. SM- Supplier Management.
17. AP- Account Payable
18. T&E- Test & Evaluation.
19. OCR- Optical Character Recognition.
20. CPO- Chief Procurement Officer
21. RPA- Robotic Process Automation
22. CIPS- Chartered Institute of Procurement and Supply
23. MD- Managing Director
24. CM- Country Manager
25. CEO- Chief Executive Officer.
26. BAE- Bangladesh Apparel Exchange
27. RMG- Readymade Garments

Chapter 01.

1.1 Title:

Investigate and implement digital tools and technology to streamline the procurement process. Evaluate the impact of E-procurement, and automation on overall procurement and supply chain efficiency

1.2 Introduction:

Life has become more accessible due to digital transactions and the E-Procurement system. In our daily context in Bangladesh, E-transaction like Bikash/Rocket/Nagad/ EFT, etc. A rickshaw puller, day labors, even a waiter in the upscale eatery is very much accustomed with E- transaction. other quarter of society holds accounts in internet banking, MFS. Now a day's people are very comfortable to procure goods, pay bills, pay salary through digitized protocol. The total digital transaction stood up to date approximately eight cores. Continuous improvements in automation and digital boosting are rekindling total supply chains in a newer form to transfer and deliver value to the customers. The disruptive technologies to procurement have already significantly customized the impact of supply functions. sourcing Strategies are increasingly predictive, providing momentum to automated transactional procurement and supply activities, consequently the SRM is becoming more enterprising. Bangladesh Bank (BB) is aiming to reach 30% cashless transaction by 2025. Research and Policy Support Agency INF (institute for inclusive Finance and Development Bangladesh) expects "As much as digital procurement rises, the financial integrity, transparency will be ensured." One of the beauties of digital procurement is it reduces the influence of intermediaries.

All of these are interlinked through prudent procurement protocols. Digital procurement solutions are offering the opportunity in future to give access to previously unavailable data, or bringing disoriented data sets into order, which is creating windows to analyze more complex process to easier supplier strategies, and enabling industries more efficient operations. Spend categories are being digitally flexible due to different SAP and the markets they access can take control digitally. New agile operating models are evolving to accommodate every single detail to yield greater results in modern business thoughts. Now a days organizations are searching digital solutions to adapt in the competitive market, the path has never been easier! these outbound automation tools are working to enhance the value of legacy systems.

China is a global leader in automation and technology. This has emboldened the Chinese industries to offer scalability and gaining tremendous competitive advantages in dozens of industry sectors. There was lots of talk of "sew bots" in place of robots. Bangladesh is a low-wage economy and garment manufacturing is a very low-wage industry. Automated sew bots can also boost the financial skeleton of Bangladesh RMG sectors.

1.3 Consumers statistics:

There was a time when bank cheque was only options to withdraw money and it was near to impossible to transfer funds from intra/interbank transfer of funds. Bangladesh bank introduced cheque clearing system in 2010 as its visionary mission. Some banks introduced ATM (automated teller machine) in early 1992. Credit card was first introduced by Standard Chartered bank in 1996. As per BB the debit card holders are 3.52 lakhs and credit card holders 24.29 K in Bangladesh. Internet banking users are 85 lakhs, Bikash/Nagad/ Rocket users are 22 crores approximately. Currently banks are introducing their sole Apps where users have all the access for digital transactions. Experts are thinking these apps may be going to outnumber the credit and debit cards soon.

Sample vital statistics 2023 reports by Bangladesh Bureau of Statistics (BBS) reveals 28% bank/ financial service providers account holders are aged of 15 to above years old, almost 48% of our populations are using cell phone financial services.

1.4 What are the Digital Tools and Technology for Procurement:

The following are some of the procurement tools that is helping us in our procurement process:

- a) E- procumbent Solutions: started from procurement planning (Requisition) to purchase order and invoice digitization. automation of whole cycle procurement,
Example- Coupa, SAP Ariba, Oracle Procurement cloud.
- b) Spend Management Tools: To track spending tendency of an organization that helps accurate purchasing decisions.
Example- Zycus and Emptoris.
- c) Supplier Management Software: This instrument helps to keep supplier performance and Risk assessment on track.
Example- SAP, SRM and Jaggaer.
- d) Contract Management Solutions: It helps to strengthen the negotiation and contract management and a contract creation
Example- Icertis and DocuSign
- e) E- invoicing Software: It reduce errors and cash flow management. Example-Taulia and Ariba Invoicing
- f) E- sourcing and E- auction Solutions: Assist to conduct online tenders and auctions. Example- Procurify, Bonfire and E-GP of CPTU BD.
- g) Blockchain Technology: Ensures transparency and security in the procurement process ensures Tamper-Proof record of transactions.

- h) Artificial Intelligence (AI) and Machine learning: AI is widely used tools to analyze procurement data, predict trends, and automate routine tasks. For example, IBM Watson and Uipath.

1.5 Components of Digital Procurement Strategy

1. Data

To further its processes, Digital Procurement uses technology. The cardinal requirement, that is data. Data is inherent in digitization and technology. The data enables the entrepreneurs to determine the needs of customers and what goods or services are suited to those expectations. data provides the industry the gateway to select its suppliers and the righteous payment for them. The data falls into two categories. The first one is profiling, this profile helps to initiate negotiation. the second one is to discover the connectivity.

2. Correct use of Technology:

The technology interprets the data, raw data is useful in a company. uniting the collected data and technology can automate the operations and processes in a company diligently. introductions of the appropriate technology will yield a process that augment digital procurement strategy. It is human errors neutral. It is our judicious applications of business mind which and what technology is to be applied to a certain process. Every occasion demands different aspects of technology.

3. User Experience based on expectations of users:

The user experience of the both internal and external stakeholders must be compelling. It must force them to use the procurement tools which is easier in nature and transaction are user friendly.

4. Procedures and protocols:

The protocols and procedures will boost the efficiency of the business. The process of digital procurement will be best suited if the coworkers and staffs know their job descriptions. It became easier to delegate the job. It helps stakeholders to know their positions in the company.

5. Brilliant and adept Workers:

The backbone of this automation is experience and brilliant individual who poses the art to make digital procurement a success one. IT professionals, software designers have also contributed to this by integrating software applications that will help digital procurement.

1.6 Essentiality of Digital Procurement:

We are living in such a society where almost faster actions are considered as a tool for customer satisfaction. The manual labor, movement, and conventional doing of tasks are a thing of the old school of thoughts in the supply chain. Of course, not all are being automated or digitized. Digitization creates new channels for business partners and customers to communicate and negotiate. It opens a dynamics and healthy working space within and outside industries.

Business owners know that to thrive in their field, they must move fast and efficiently. That is why many businesses have embraced digitization to develop new ways of improving their operation. Digital procurement creates interaction with the buyers, suppliers, and third parties that will produce new ways of mutual collaboration.

1.7 How to Implement Digital Procurement:

Here are the steps on how we can implement it:

1. Actual Information Accumulation:

To streamline digital procurement plan it is to keep in mind the future trends in procurement so that our planning may not be outdated while countering new entrants and substitute.

2. Notice the Future trends:

Forecasting the future and create strategy to sustain our plan in the coming days in a suitable fashion or manner. Constant dialogues and experience sharing with procurement managers and related entities. Once we know our modality, we would think about the required technology.

3. Plan of Action:

Making a schedule to harvest our Return on Investment (ROI). Now let us identify how digital procurement and E- transactions has been emerged from conventional business thoughts. the below concept could enlighten us the reason.

1.8 brick-and-mortar Retail channels:

Refers to physical stores where customers can visit, browse, and purchase product directly. These stores often provide a tangible shopping experience, allowing customers to see, touch, and try products before buying them. Real world examples are “Swapno”, “Agora”, “Arong” Bangladesh, IKEA, Walmart etc. The newfound global reach has become instrumental in reducing dependence on traditional brick-and-mortar retail channels by adopting E- Commerce and Digital transactions.

1.9 E-commerce and digital transformation:

The rise of E-commerce and digital platforms has transformed the retail landscape, presenting new opportunities for the garment industry. Industries in Bangladesh are increasingly incline to digital transformation, the rising online sales channels are digitally enabling design and production processes. This shift facilitates direct access to consumers and promising Agile thinking are on the go to address customer expectation and make them loyal to the system.

E-commerce has disassembled geographical hindrances, allowing Bangladesh's RMG sectors to reach global customer audience with overwhelmed successes. Online sales platforms are creating plenty of opportunities for manufacturers and exporters to showcase their products to customers globally, offering to tap into previously undiscovered markets.

E-commerce platforms empower Bangladesh's RMG industries to adopt a direct-to-consumer (DTC) model, the aim of this model is to eliminate intermediaries and construct a more direct connection with end users. This paradigm shift permits manufacturers to obtain better control over branding, pricing, and customer relationships. Our cardinal aim is to reduce intermediaries where customers comfort is a priority not to let a dent to their wallet.

E-commerce platforms redouble the visibility and branding of Bangladesh's RMG industry. Through digital marketing strategies, manufacturers can display their products to a wider and diverse audience. Social media, search engine optimization, and other online marketing fronts enable entrepreneurs to build a strong brand image, fostering consumer trust and loyalty.

E-commerce facilitates real-time and real-world communication and collaboration across the whole supply chain, from downstream to upstream users and players. This digitized connectivity optimizes inventory management, reduces lead times, and minimizes the risk of overstock or stockouts. The efficient flow of information ensures that products are delivered to consumers just in time (JIT), it helps to contribute customer satisfaction and generate loyal customers.

The digital nature of E-commerce transactions generates vast amount of data that can be leveraged for insightful analytics. Bangladesh's garment industry can use this data to understand consumer behavior, preferences, and market trends. By analyzing this information, businesses can make data-driven decisions, refine their product offerings, and tailor marketing strategies to better align with the needs and desires of their target audience.

E-commerce platforms enable the garment industry to offer customized and personalized products, catering to individual preferences. Through user-friendly interfaces, consumers can personalize garment specifications, choose colors, and select sizes according to their preferences. This level of customization enhances the overall shopping experience, fostering a sense of individuality and exclusivity. It promotes the reverse logistics and creates opportunity and inclusivity of target customers.

1.10 Digital Transaction Service Demands more Investment:

Currently financial organizations are allocating resources for the development of digital transaction structures, but more funding is required to boost it. The investment for digital platform has given a positive momentum to local and global economy, but the aspirants of e-procurements is demanding more facilities like the introduction of Digital Bank (DB). Not only the transaction but all the operations shall be digitized without OTC (Over the Counter), it will not have any branch, ATM, CDM or CRM, all its operations will be done through APPs, and Cell phones. DB account holders can enjoy the facilities other conventional banking system through DB also. A traditional bank needs 500 crores as its primary capital but for DB only 125 crore is enough for its primary capital. Nagad is pioneering as chartered Digital Bank (DB) in Bangladesh (currently after the taking over of interim Govt. Nagad digital transaction activities are suspended). The aim of digital bank is to create a cashless economic domain. Digital banking shall bring a formidable change in supply chain pattern. The operating cost and transaction costs of digital banking will be minimum apart from traditional banking. DB would be aligned with artificial intelligence and block chain concepts. As it is paperless, SMEs would have access to get loan without collateral and it is going to mark a mentionable milestone in Supply and Demand chain in micro or even nano level. More investment is required to boost the above-mentioned concepts for better supply chain management where influence of intermediaries is zero.

Chapter 02

2.1 Research methodology:

To evaluate the impact on the overall supply chain, E- Procurement and digital transaction plays a vital role in today's world. The research methodology type is mixed –method approach which gives the user experience and challenges, efficiency improvement and cost benefits.

2.2 Case Studies on E-Procurement and Digital Transactions:

1. B2B E-Procurement Growth:

A 2023 report says E- Procurement sales surpassed \$1 trillion and year by year its growing 18%. This growth highlights the automation in ordering, invoicing, and supplier management. The best practice of this growth platform like Amazon business facilities likes it and 91% of procurement managers adopts and choosing online procurement

2. AI and Machine Learning in Digital Transaction and Procurement:

Veridion's suppliers' discovery tools have gained buyer and suppliers satisfactions in terms of suppliers sourcing and spend categorizations. these tools leverage real time data analysis to streamline procurement workflow's, enhanced leadership in decision making and risk management

3. Cloud – based solutions:

It is a revolutionary business model on automation and digital transactions. Its beauty is flexibility and economy of scale and scalability. the vendor relationship, payment processing is become easier for this cloud-based solutions.

Few examples are given below.

A) **SAP Ariba**: it is cloud-based market place connects buyers and suppliers.

Johnson & Johnson entirely connects buyers and suppliers through this platform to ensures supplier's visibility and collaboration by automating sourcing process and allowing real-time supplier performance tracking.

B) **Coupa**: Procurement, invoicing and expense management tools that powered by AI to optimize digital procurement decisions.

Unilever uses Coupa to reduce manual transactions and increase spend visibility across its global operations save both time and cost to streamline compliance and corporate procurement policies.

- C) **Oracle Procurement Cloud**: offers contract management, sourcing, supplier qualification and automated purchasing. FedEx implements its global operations by using this tool and reduced its cycle times and enhanced procurement efficiencies.

2.3 Literature Review:

1. Book Review: "E-Procurement and the Purchasing Process" by Thomas Rebstock and Birgit Feldmann

"E-Procurement and the Purchasing Process" by Thomas Rebstock and Birgit Feldmann provides an in-depth examination of the implementation and impact of electronic procurement systems in modern supply chains. The authors aim to guide organizations through the process of adopting E-procurement technologies to enhance efficiency, reduce costs, and streamline purchasing processes.

Key take away:

Overview of E-Procurement Systems:

The book begins by explaining the fundamentals of E-procurement, describing how these systems integrate with traditional procurement practices. It highlights the transformative power of digital procurement tools, emphasizing their role in automating repetitive tasks, improving supplier communication, and centralizing purchasing data.

Benefits of E-Procurement:

Rebstock and Feldmann stress the advantages of implementing e-procurement solutions, such as reduced transaction costs, improved transparency, faster procurement cycles, and enhanced supplier management. The authors provide practical examples of how companies have achieved cost savings and operational efficiencies by leveraging digital procurement tools.

Implementation Challenges:

The book does not shy away from discussing the potential challenges and risks associated with E-procurement adoption. Organizational resistance, integration with legacy systems, data privacy concerns, and the need for adequate training are all addressed. The authors offer strategies to mitigate these issues and successfully implement E-procurement systems.

Technology and Innovation:

The role of emerging technologies, including artificial intelligence, cloud computing, and blockchain in procurement, is explored. The book outlines how these innovations can further

enhance procurement processes by providing advanced analytics, improving security, and enabling real-time data sharing across global supply chains.

2.4 Practical Case Studies:

One of the strengths of the book is its use of case studies, which provide real-world examples of companies that have successfully implemented e-procurement systems. These case studies offer insights into the practical challenges businesses face and how they overcome them to achieve procurement excellence.

"E-Procurement and the Purchasing Process" is a well-rounded guide for procurement professionals, managers, and decision-makers looking to adopt or improve their e-procurement strategies. It balances theoretical insights with practical advice, making it a valuable resource for those aiming to streamline procurement processes through digital solutions. The book provides a clear roadmap for transitioning to e-procurement while addressing potential challenges and opportunities along the way.

1. The Future of Procurement in the Age of Digital Supply Networks by Deloitte Industry Reports:



Figure 1: characteristics of digital procurements

Source to Contract (S2C): There is no worry about sourcing goods and services, selecting supplier, and, securing the best value and prices for the organizations are already exists in a world and it is possible to cater it in following ways:

Categorize real- time spending management,

Anchorage and leveraging machine learning,

AI powered demand prediction,

Know landed cost for any commodity for other countries of origin,

Predict future sources of supply if bottleneck or other issues raised.

Act Just in Time to all negotiated agreements (e.g. indexed pricing, penalties, renewals) through a smart contract.

Procure to Pay (P2P):

P2P Becomes automated in today's world. Transactions which include processing purchase orders, requisitioning goods, and services, validating reception of materials, paying invoices, etc., become digitally routinized and require minimal human intervention.

Supplier Management (SM):

SM develop strategies to increase the value of supplier relationships and minimize or transfer risks, in following ways:

Monitor real-time potential supplier risks through the total visualization of third-party data feeds,

Conduct supplier visits from their own office utilizing computer generated image also called augmented reality,

Conduct supplier audits through crowdsourcing,

Collaborate through supplier networks.

Leveraging better data from the S2C, P2P, and SM processes, accessing supplier innovation through collaborative platforms and innovation labs; advanced analytics, increased computing power, and improved visualization technologies, digital procurement ultimately provides better evidence-based options for decision making and improve the accuracy of strategic decisions

Digital Technologies and Capabilities

The digital solutions and capabilities have reached the maturing phase which are discussed below; CPOs that have not taken it to ensure competitive advantage should embrace it quickly for table stakes:

Cognitive computing and artificial intelligence:

Leverages pattern recognition software and iterative machine learning algorithms to rapidly categorize unstructured and disoriented spend, cost, contract, and supplier data (e.g., information like raw AP records or T&E systems extracts not within the traditional structure of an ERP system) to deliver new cognizance and opportunities. Leverages cognitive agents like *Chatbots* to automate answering a wide range of supplier queries thereby reducing administrative costs and burden on the procuring entity.

Intelligent content extraction:

Uses Optical Character Recognition (OCR) and learning algorithms to read unstructured documents such as PDFs of contracts, specification drawings, and Bills of Material, and rapidly extract critical pieces of data like pricing tables, payment terms, and termination clauses in a minute that would have taken days or weeks to assemble while doing it manually.

Predictive and advanced analytics:

Combines modeling, statistics, machine learning, and artificial intelligence with multiple third-party data sources to predict most likely scenarios for cost/price fluctuations, demand, suppliers' country risks, etc. and enable proactive decision making.

Visualization:

Transforms data into user friendly, executive-friendly, visual formats that can simplify decision making by organizing information and delivering fresh insights and recommendations.

Collaboration networks:

Providing a platform to buyers and suppliers viewing all elements of their joint value chains. parties can obtain supplier information in the cloud, enable them to measure, analyze, and manage supplier performance; uncover joint process and pain points improvement opportunities to identify, monitor, transfer and escalate supplier risks.

Crowd sourcing:

The capture of large and diverse inputs like data, sentiment and usually leveraging mobile technology, organizations can identify new supply markets, draw on the crowd to upload and collaborate on their new products and ideas, and can obtain data about customers and related industry experts to monitor trends and events which influences supply chains and supplier performance.

3D printing:

3D printing technology, can quickly imitate a physical object from an automated model by laying down layers of a material. Recently it is widely used for rapid prototyping of goods. the technology has the potential to eliminate some kinds of stocking activities for low-volume items, replacing them with on-demand production with agility.

Robotics:

In terms of procurement, Robotics Process Automation is software that recognize and perform rule-based tasks. Robotics is used to automate multiple repetitive manual tasks driving efficiency and minimizing errors and risks in execution.

Four additional emerging automation applications are expected to blow procurement process in the coming days, PEs and leaders must be equipped themselves to welcome it in an adept hand for adoption:

A) Blockchain:

This cryptologic data structure uses a trusted peer-to-peer network to create E- transaction ledgers which can verify and validate transactions in the P2P process, it is an useful tools to trigger automated payment system.

Sensors and wearables:

Detecting, capturing, and recording devices for physical data. These devices can notice and keep notes on the movement of goods and inventory levels for reordering, and audit tracking during site visits.

Cyber tracking:

Real-time tracking of online or physical activity can be used

Virtual Reality and Spatial Analytics:

These are two valuable technologies, when they start working together produce transformative abilities for data visualization and analysis. It helps advanced visualization, interactive exploration and enhanced decision making.



Figure 2: Today's digital technologies, and the degree to which the capabilities are being deployed in procurement.

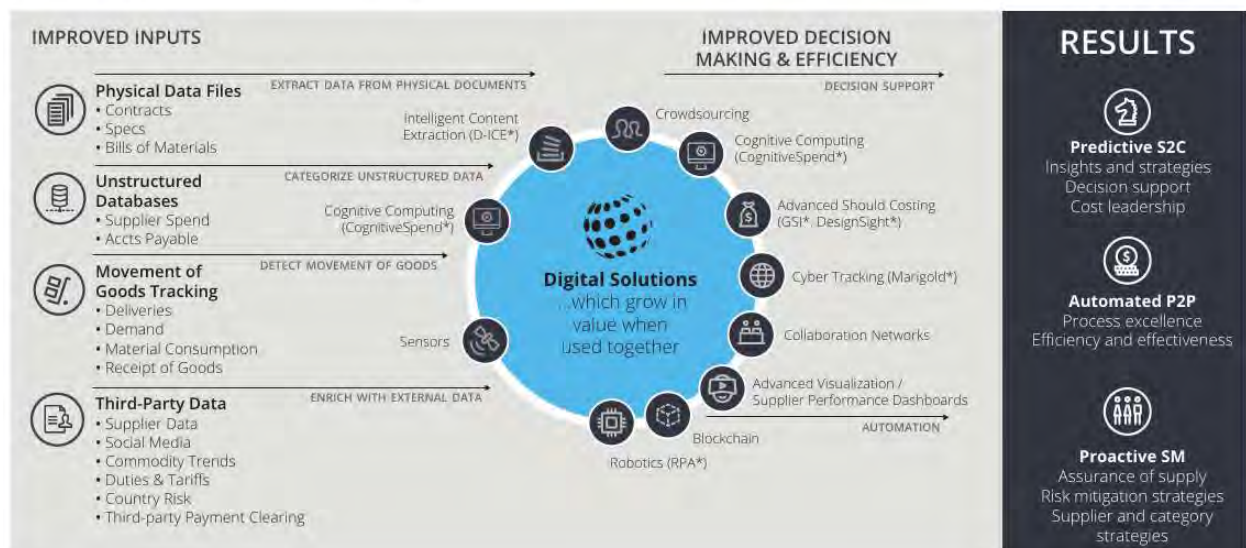


Figure 3: digital procurement Analytics to drive results.

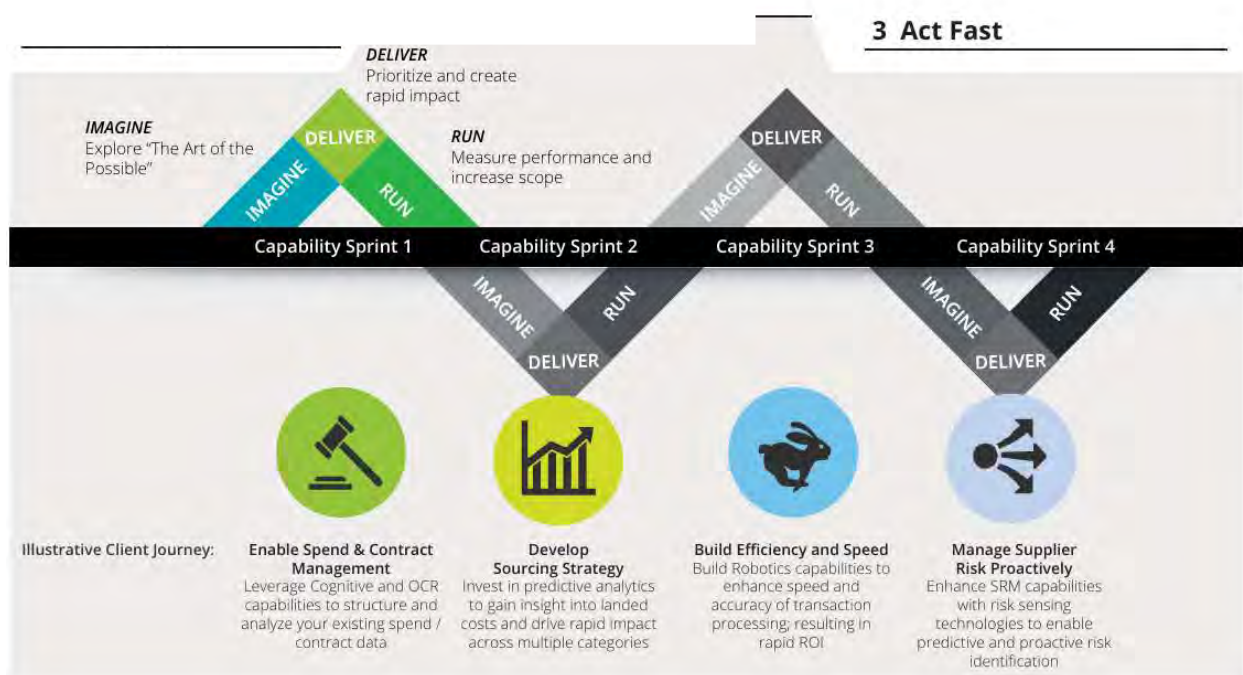


Figure 4: Illustrative Journey of clients

2.5 Benchmarking Reports:

To create a report on the implementation of digital tools and technologies to streamline the procurement process, and to evaluate the impact of e-procurement and automation on procurement and supply chain efficiency, you can use several benchmark industry reports. These reports offer insights into best

practices, key metrics, case studies, and industry trends related to procurement transformation. Here are some key sources and the types of data they provide:

1. Deloitte Global Chief Procurement Officer (CPO) Survey

This report highlights trends and challenges faced by procurement leaders globally. It focuses on digital transformation, the adoption of automation, and e-procurement tools, as well as the impact of these technologies on cost savings, supplier collaboration, and risk management.

2. The Hackett Group Procurement Key Issues Report

The Hackett Group's report provides in-depth analysis of procurement performance, including the impact of automation and digital transformation. It focuses on cost optimization, efficiency improvements, and supplier management strategies.

3. Gartner's Procurement and Supply Chain Technology Reports

Gartner publishes several reports analyzing trends in supply chain and procurement technologies, including the impact of e-procurement platforms and automation tools like AI and robotic process automation (RPA).

4. Procurement Leaders: Digital Procurement Trends

Procurement Leaders provides various reports and benchmarks that examine digital procurement trends, automation, and supply chain digitization. The focus is often on how digital tools like e-procurement platforms enable agility, improve supplier management, and enhance process efficiency.

5. McKinsey & Company Supply Chain Digitization Report

McKinsey explores how companies can digitize their supply chains and procurement processes, focusing on the use of automation, data analytics, and e-procurement tools. It includes data on how companies are driving value through procurement innovation.

6. CIPS (Chartered Institute of Procurement and Supply) Reports

CIPS regularly publishes reports on procurement best practices, including the benefits of e-procurement, automation, and digital supply chain management. They provide industry standards for procurement efficiency and supplier management.

3.1 Interview:

The following questions were asked to know the real-world scenario to the professionals mentioned below:

1. Ali Reza Iftekhar, MD Eastern Bank

Q.1 how digital platforms are helping you?

MD EBL- Contactless card, E- Commerce, Digital wallet, virtual card, banking apps all those products are made for digital transaction to ease convenient supply chain management.

Q.2 What facilities and advantage you are offering to your clients?

MD EBL- Consumers are using the ultimate advantage of digital transactions to procure different amenities, furniture's, jewelry by using EMI facilities which differs from traditional supply chain issues and ensure more comfort to the end users.

2. Mashrur Arefin, MD, The City Bank

Q.1 what is opinion about a cashless society in Bangladesh?

MD, The City Bank- Bangladesh has taken appropriate steps to introduce a cashless as its national agenda. Though it is in the initial stage but has create some remarkable development in this regard. Investors and citizens are prone to digital transaction, one day cash transaction may disappear.

Q.2 Name some recent digital products?

MD, The City Bank- Automated cheque disbursement, NPSB, EFTn are very much effective instruments for modern supply chain.

Q.3 Do you find any risks?

MD, The City Bank- Yes, the risks of digital fraudulence are on the rise in the digital landscape.

3. Syed Mohammad Kamal, Country Manager (CM) Mastercard Bangladesh

Q.1 Say about the prospects of Digital Transactions in Bangladesh?

CM, Mastercard Bangladesh- Digital transaction was seemed to a far behind dream before five years, but Covid -19 pandemic has taught us the importance of cashless payment. General users are habituated to this platform gradually. Digital transaction is now a priority to the national policy of

Bangladesh Govt. Government have aligned digital transaction with its vision 2025 to ensure 30% cashless society and by 2030 its 100%.

Q.2 Are you satisfied with the existing policy support to promote Digital transactions?

CM, Mastercard Bangladesh-Government, and financial organizations are working diligently to offer the digital payment service from the street vendors to SMEs for effective supply chain management. To ensure general cashless system it requires appropriate and robust Policy adoption and incentives.

4. **Mostafiz Uddin** *is the managing director of Denim Expert Limited. He is also the founder and CEO of Bangladesh Denim Expo and Bangladesh Apparel Exchange (BAE).*

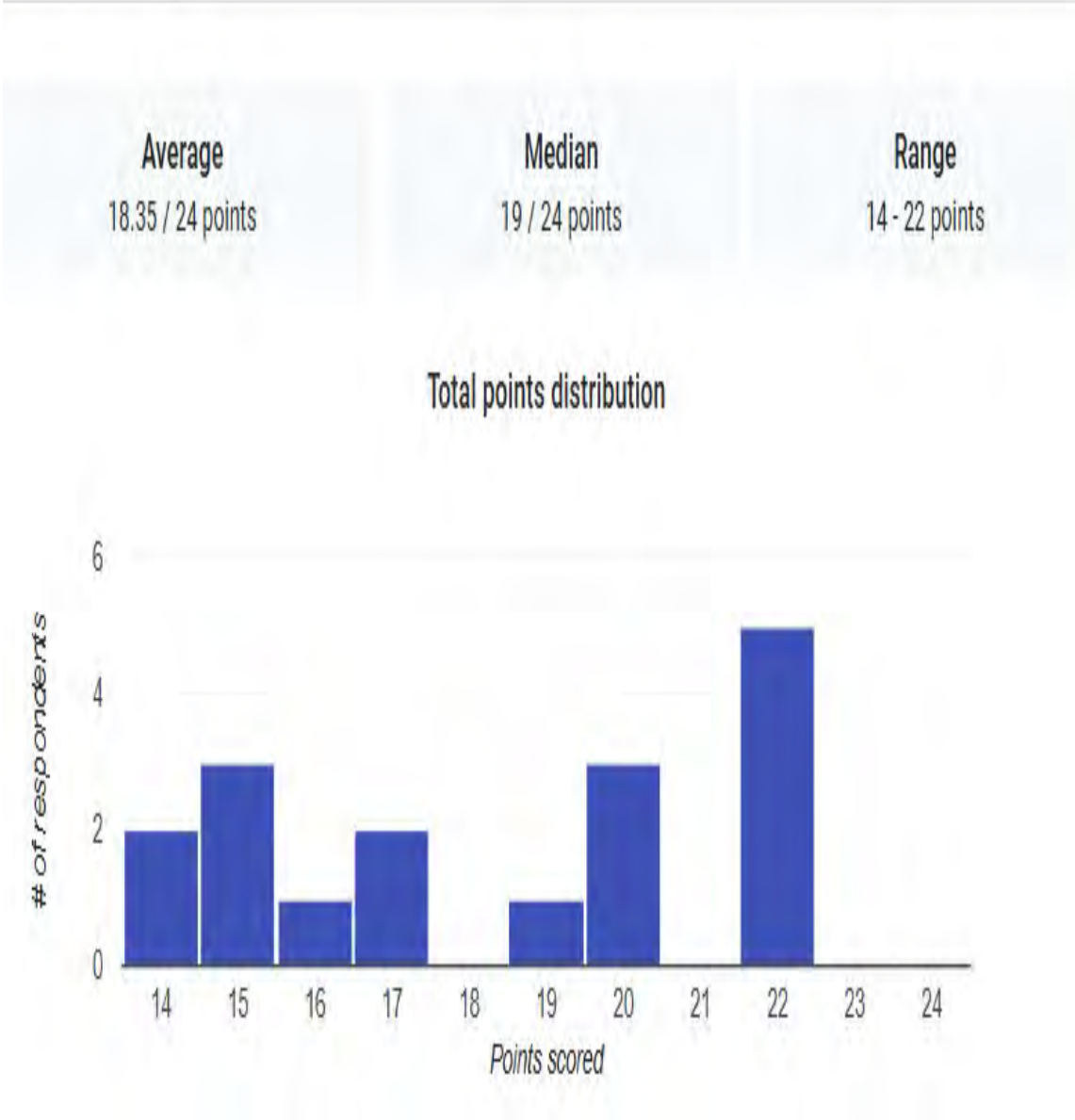
Q.1 Is digitization is on the right way to go for RMG?

Mostafiz Uddin - It could be fruitful to observe automation take off in higher-wage garment production countries in Europe as well as China and Vietnam in Asia. These countries could act as a testbed for what is or is not possible with automated garment production and give us a glimpse into the limits of new technologies. That might be a positive for Bangladesh at present, when job insecurity is already high due to the global economic slowdown.

3.2 Survey Report and Data Analysis:

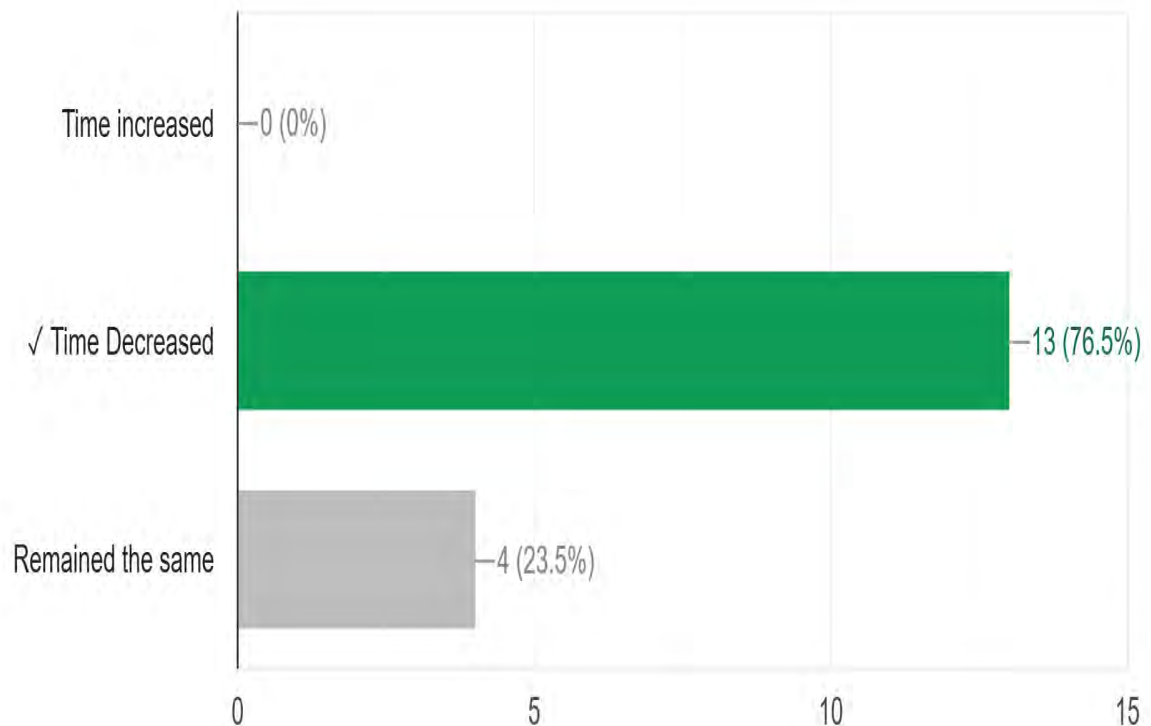
During the survey, I have prepared two sets of questionnaires one for Procurer or Procurement Related professionals and other for Suppliers or supply related Professionals.

Insights



A. The time required for collecting quotation after introducing E-procurement: (ই-প্রকিউরমেন্ট প্রক্রিয়ায় কোটেশন সংগ্রহে কত সময় লাগছে?)

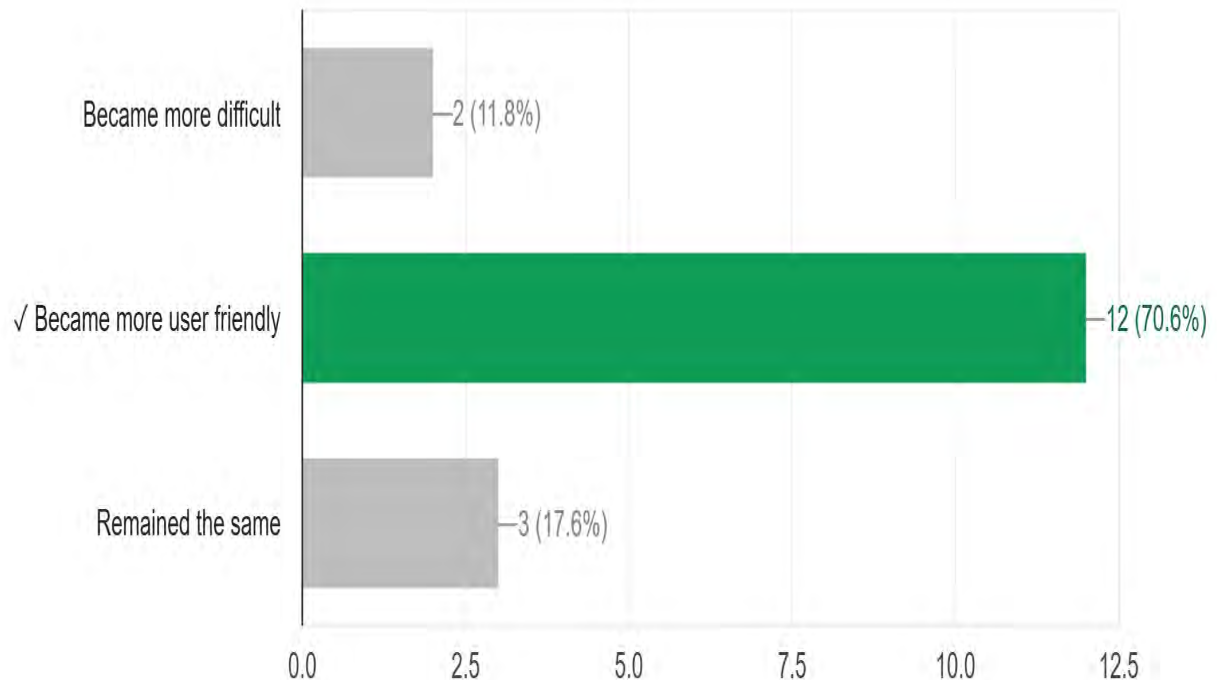
13 / 17 correct responses



Findings: The response indicates the required time for collecting quotation after the introduction of E-Procurement has decreased. 76.5% participants responded in favour of reduced time, while 23.5% Procuring entity thinks it has remained the same. So, the efficiency of E- Procurement has increased due to digital presence in the business.

B. Difficulty level for procurement personnel to use e-procurement software: (ই-প্রকিউরমেন্ট সফটওয়্যার ব্যবহারে কোন সমস্যার সম্মুখীন হচ্ছেন?)

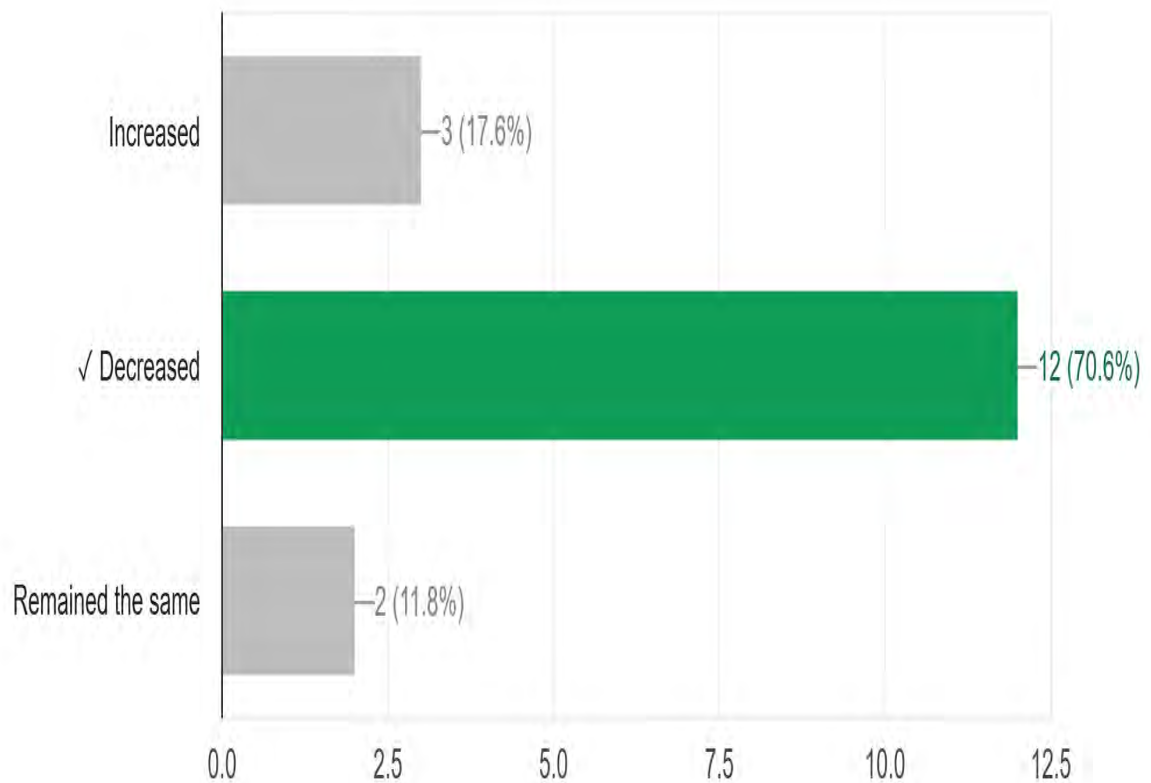
12 / 17 correct responses



Findings: Responded as shows difficulty level has been reduced and the E -procurement process became more user friendly than the manual maneuver. The total scores are high representing the user-friendly features of E- Procurement. 70.6% are in favor of this proposition.

C. The cost of procurement process after using software: (সফটওয়্যার ব্যবহারের ফলে ক্রয় সংক্রান্ত খরচে কি প্রভাব পড়ছে?)

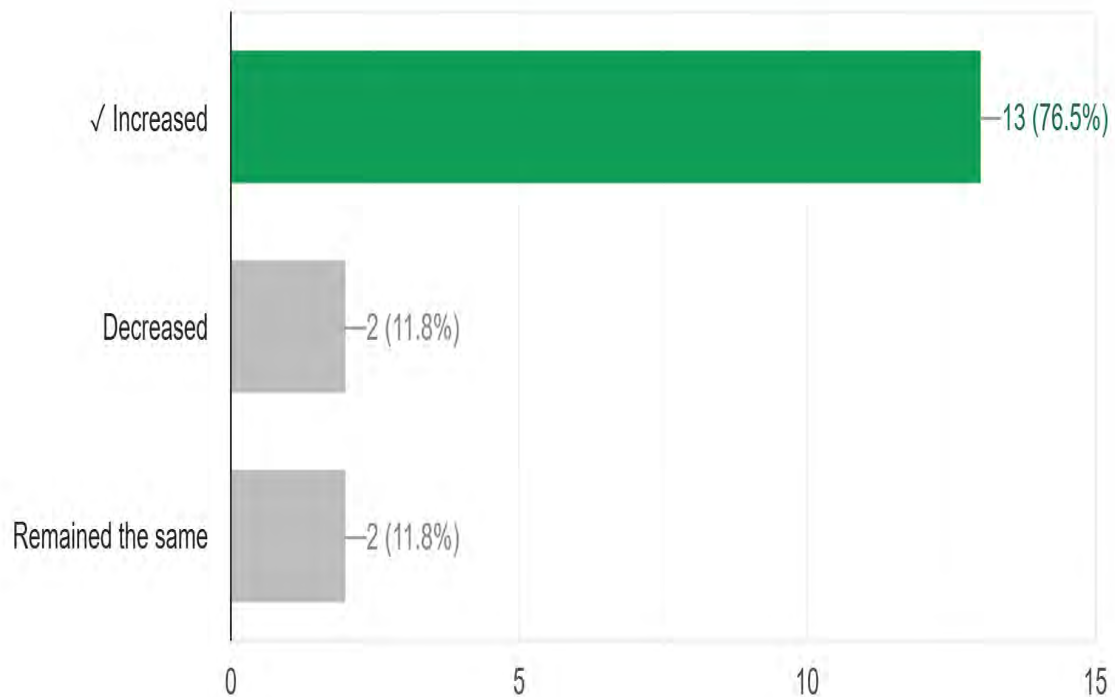
12 / 17 correct responses



Findings: The cost of procurement process has decreased due the integration of procurement software. 70.6% participants are in favor of reduced cost while 11.8% are in the static views like the manual operations. reduced costs also reduced the carbon footprint. The score remains high to qualify the procurement process.

D. Number of quotations from different suppliers: (কতজন সাপ্লাইয়ার কোটেশনে অংশগ্রহন করতে পারছে?)

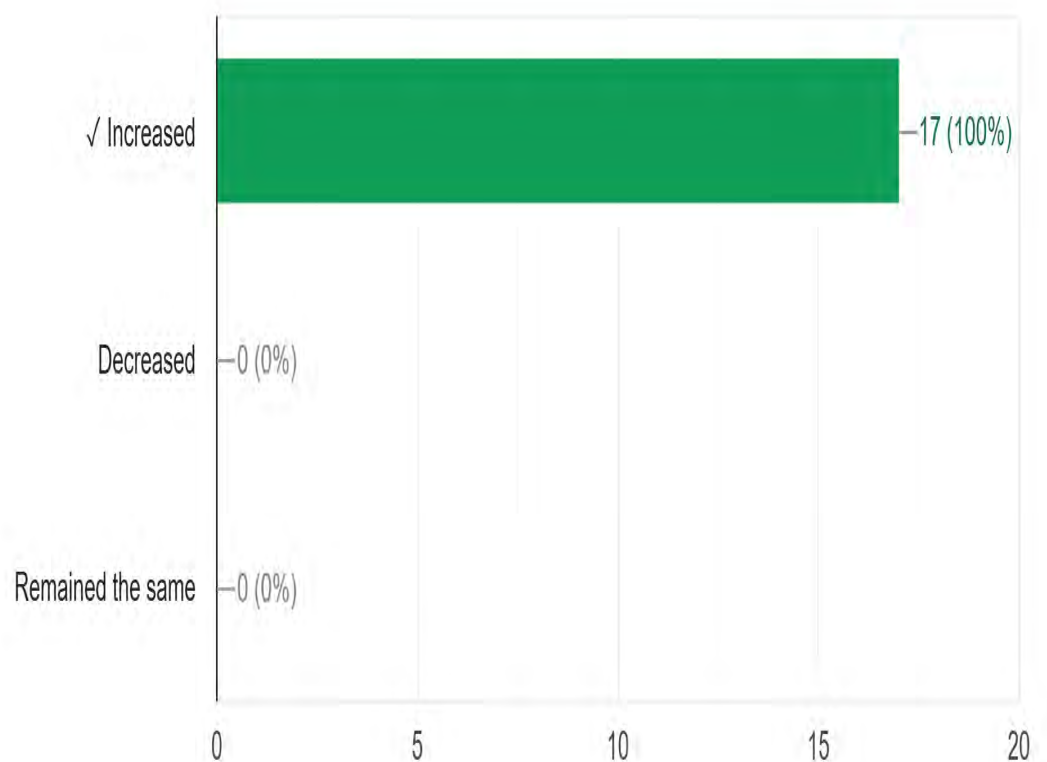
13 / 17 correct responses



Findings: The number of quotations has raised due to secure tender dropping process. 76.5% PE thinks the number of quotations is increased due to automation. 11.8% thinks its decreased and same 11.8% opined it has remained same. Anyone can participate and quote from anywhere which has increased competition, survey also suggests in a few cases it remained same and number of quotations dropped. I have personally asked them the reason why the decreasing tendency he/she noticed? The reply was disorientation with disruptive technology may hindering it. Training for digital procurement is essential they insist.

E. Satisfaction level of procurement personnel after using E-procurement: (ক্রয় প্রক্রিয়ার সাথে জড়িত ব্যক্তিগণ ই-প্রকিউরমেন্টে সন্তুষ্ট কিনা?)

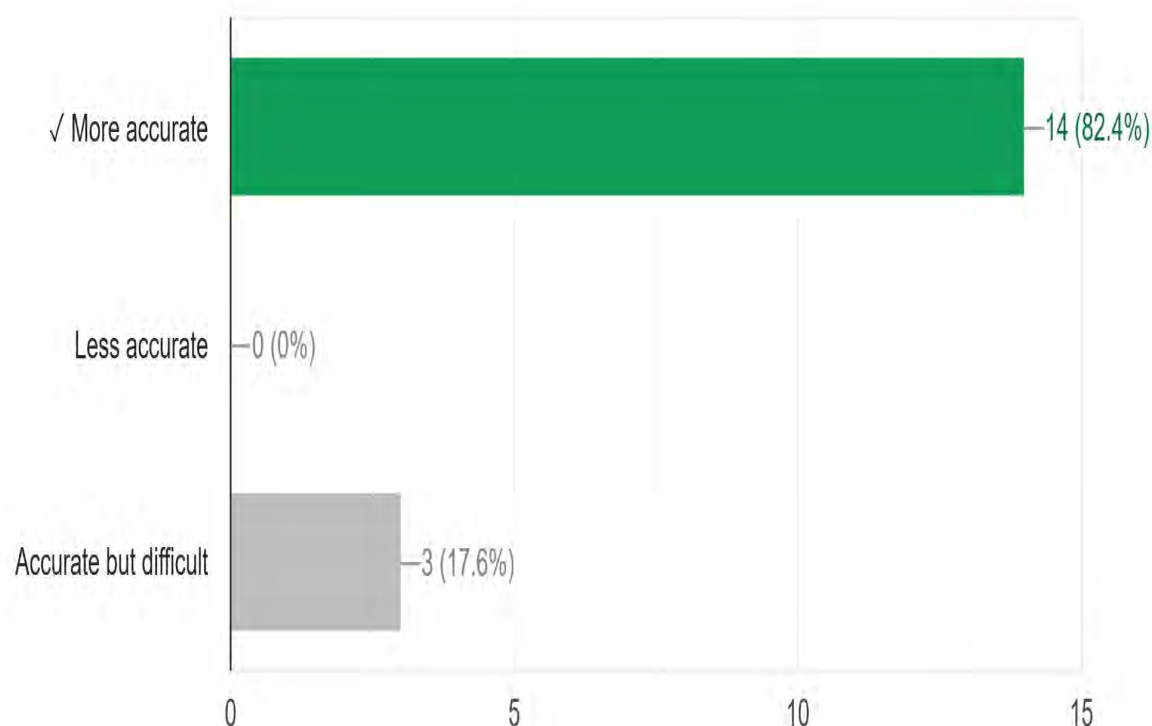
17 / 17 correct responses



Findings: Persons related to procurement activities (including PE) are highly pleased dealing the process digitally. The survey shows the level of satisfaction is 100%.

F. Supply chain inventory handling and data keeping became: (ইনভেন্টরি/ডাটা সংগ্রহ সহজ ও সঠিকভাবে হচ্ছে কিনা?)

14 / 17 correct responses

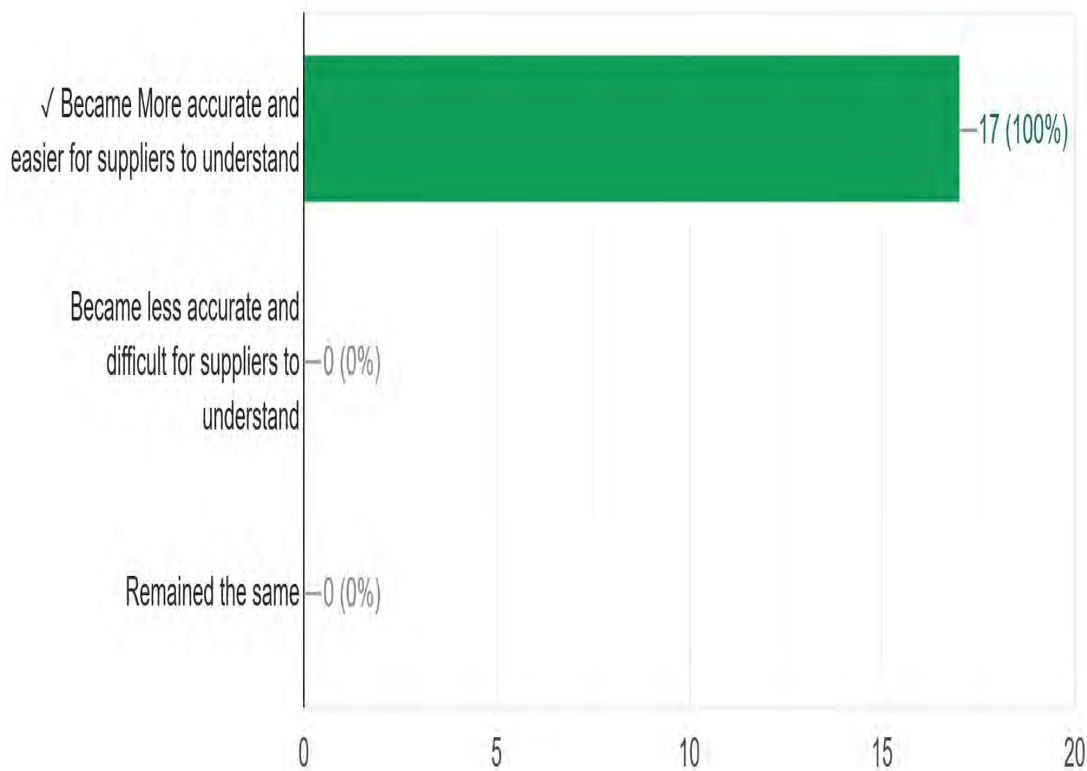


Findings: 82.4% participants are satisfied in-terms of data management and inventory handling by using Procurement software, while 17.6% thinks it gives accurate result but difficult to handle.

G. Purchase order terms and conditions and data accuracy after using E-procurement became:

(ক্রয়াদেশ শর্তাবলী ও ডাটার নির্ভুলতা বজায় রাখা হচ্ছে কিনা?)

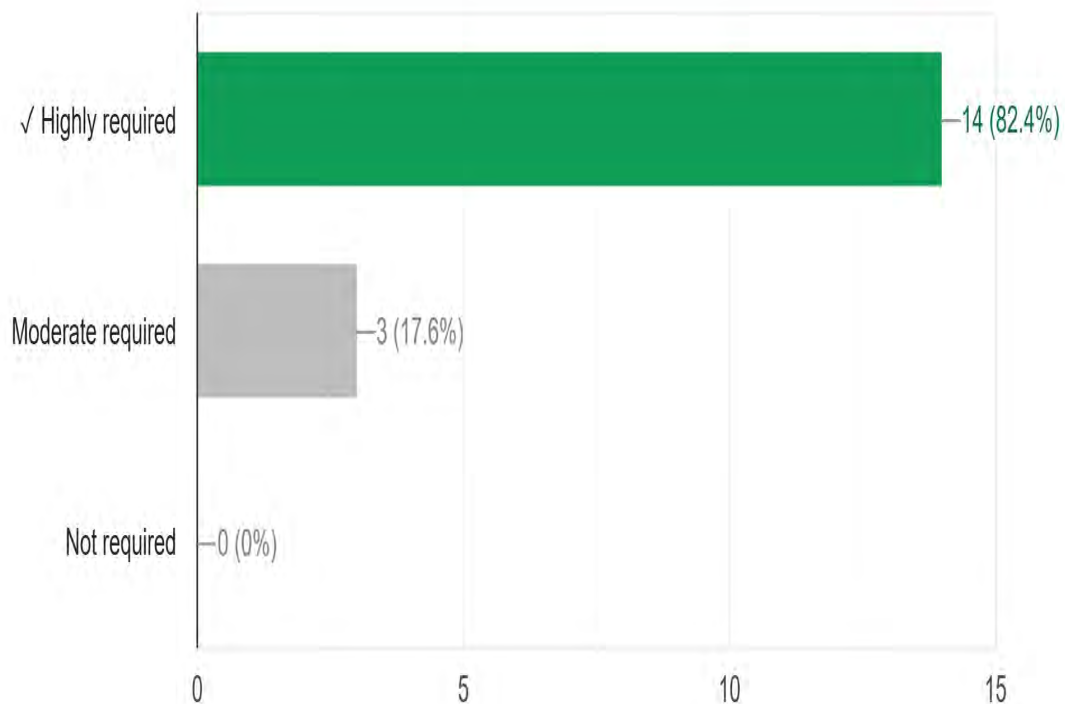
17 / 17 correct responses



Findings: Purchase order placement and its terms and conditions are become more easier for suppliers and Procurers where data accuracy is kept in a cardinal position for its authentication. Survey result suggests 100% accuracy for the above-mentioned indicators.

H. Importance of regular assessment and training by expert: (নিয়মিত প্রশিক্ষণ ও মূল্যায়নের গুরুত্ব রয়েছে কিনা?)

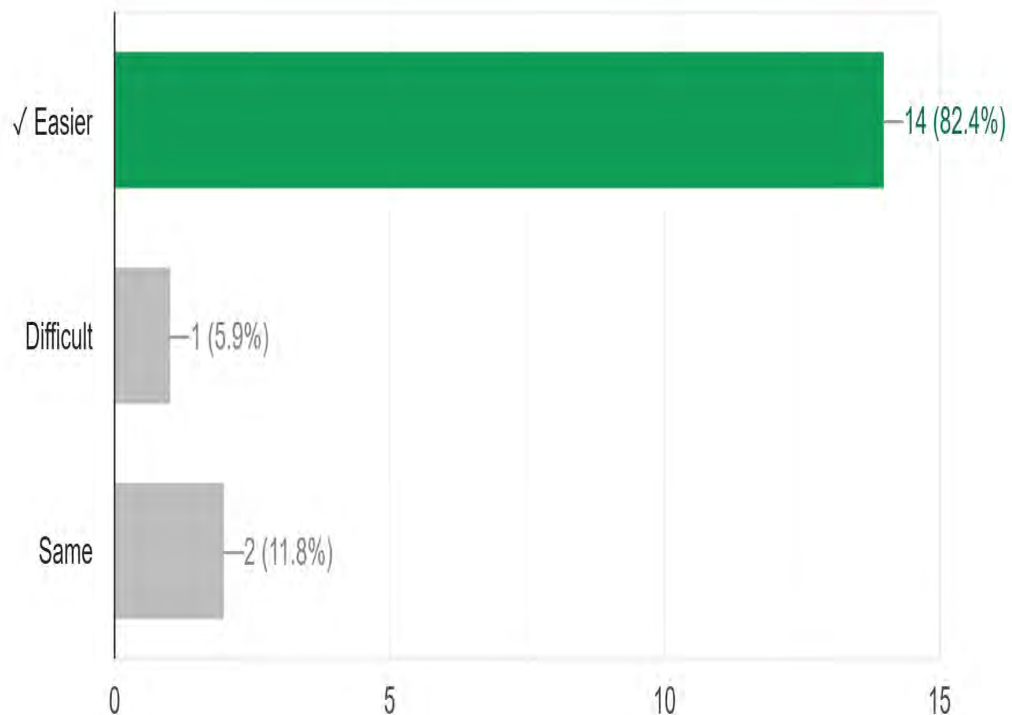
14 / 17 correct responses



Findings: The survey reveals 82.4% of the participants believes regular assessment and training is required by the procurement expert, while 17.6% insists for moderate training and assessment.

I. Supplier performance evaluation has become: (সাপ্লাইয়ারদের কর্মদক্ষতা মূল্যায়ন সহজ হয়েছে কিনা?)

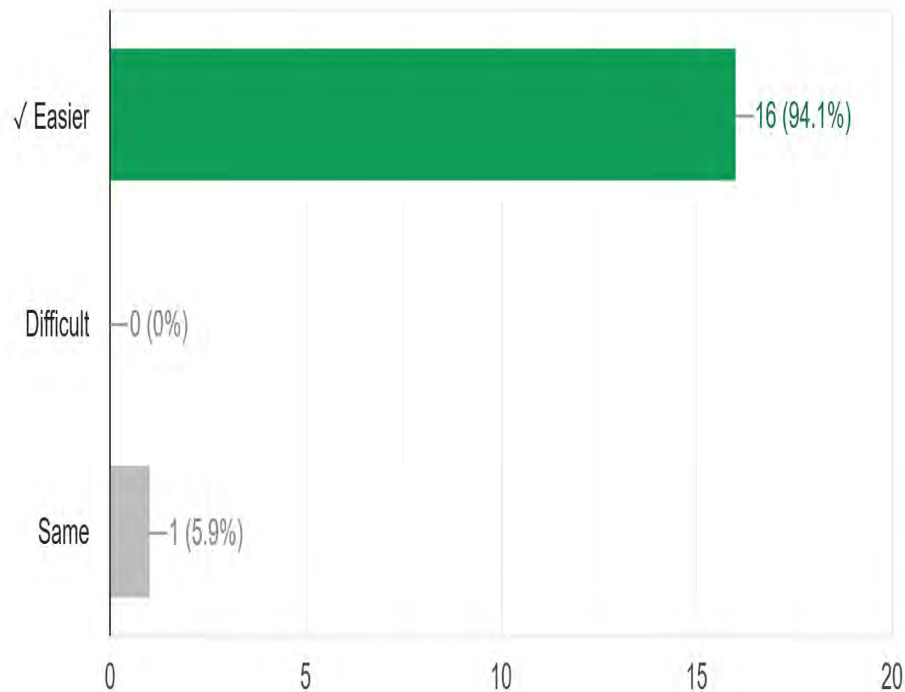
14 / 17 correct responses



Findings: The supplier's performance is taken into consideration to respond quickly what they have done before and their previous performance can be easily benchmark by using procurement software and hardware. 82.4% participants think it's become easier than before, 5.9% thinks it difficult and 11.8% thinks it remained same.

J. Contract management and monitoring has become: (চুক্তি ব্যবস্থাপনা ও পর্যবেক্ষণ সহজে হয়েছে কিনা?)

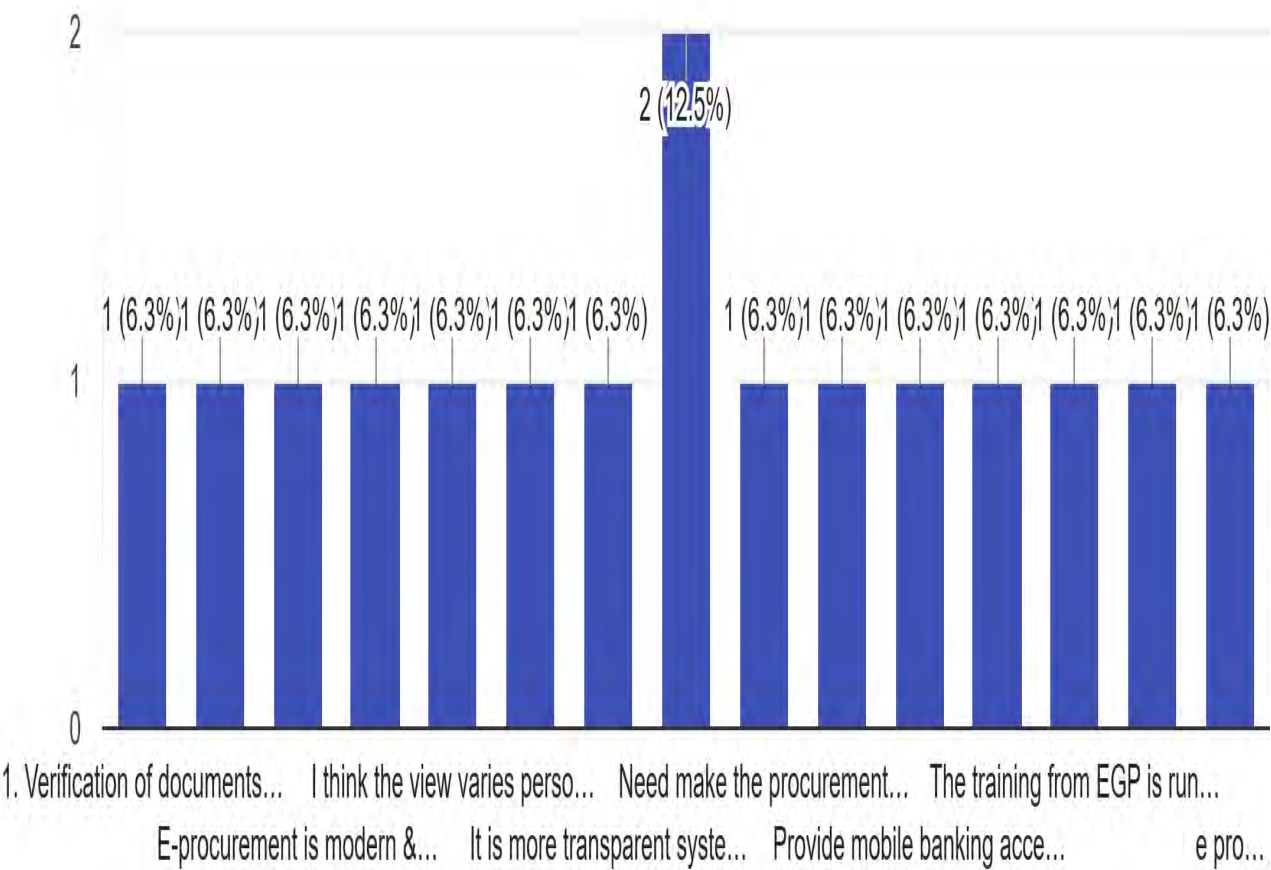
16 / 17 correct responses



Findings: The contract management and its monitoring are become more easier than before due to digital upload of the documents. 94.1% is in favor of the digitized process. 5.9% thinks it is same like before. Suppliers are in a binding to share their verified and required documents to the digital system easily.

if you have any suggestions other than the questionnaire provided above please share your ideas or thoughts to enhance E-Procurement and Digital Transaction as a procurement official or entity.

16 responses



The individuals have given their opinion which are not mentioned in the questionnaire are given below:

- 1.Verification of documents should be added in this system.
2. Release of tender security should be automated.
- 3 here password is used as digital signature figure print or digital signature may be used
- 4.I think the view varies person to person, some skilled yet old procurement personnel might be used to with the manual system, and change management is always a difficult thing, but after using e-procurement system it will surely save time and increase competition since suppliers from distance can also participate in this kind of system.
- 5.Need make the procurement process more lean and continuous improvement of the process .
- 6.The training from EGP is running is useless unless one supplier be familiar with submission systems. Maximum EGP user is dependent on other guy where is every company representative should get how to operate total system, but training is for knowing what is procurement system and law.
7. E-procurement is modern & standard method
- 8.. It is more transparent system can ensure more participation in tendering process. It can ensure which are the compliance with public procurement principles.
9. Provide mobile banking access that help to increase digital transaction
10. E- procurement process is more transparent than manual process.

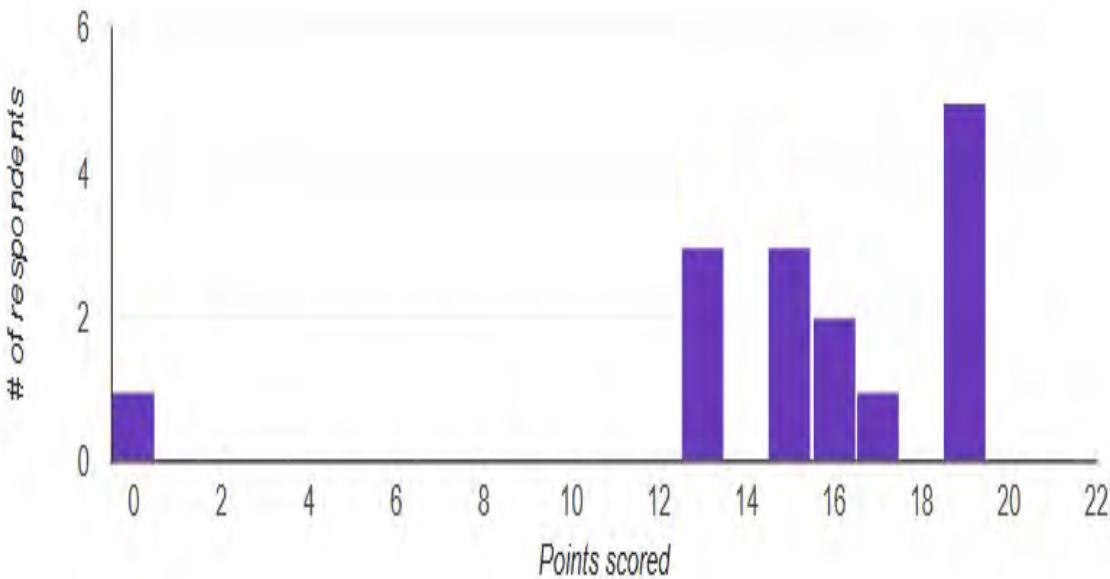
 Insights

Average
15.2 / 21 points

Median
16 / 21 points

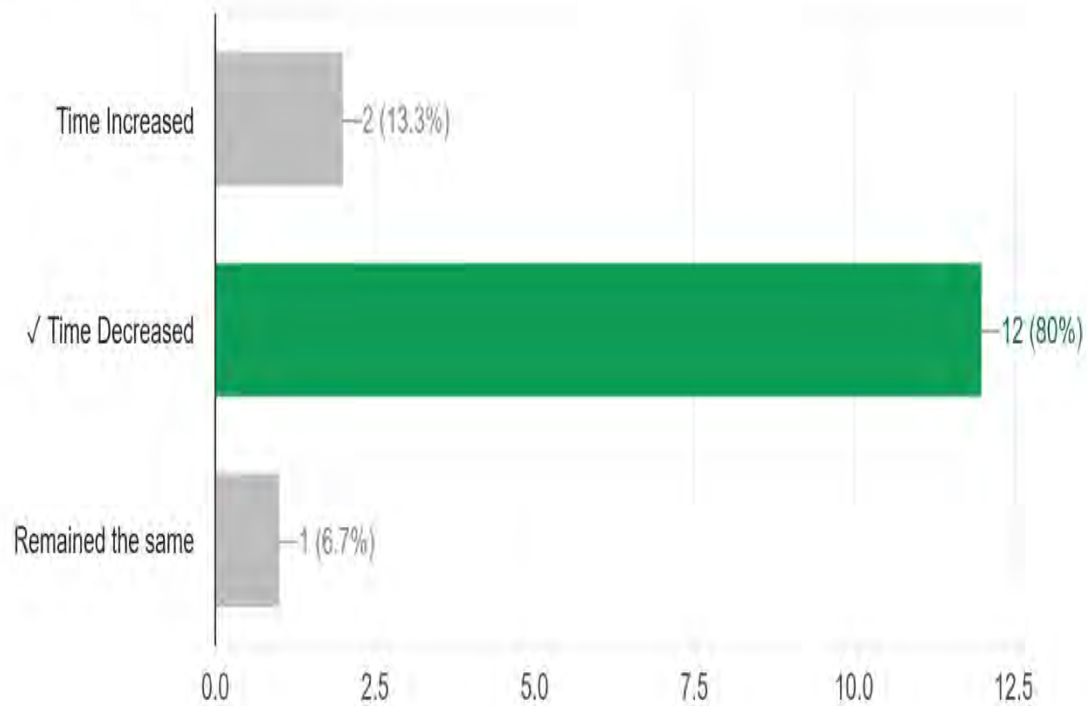
Range
0 - 19 points

Total points distribution



A. The time required for preparing quotation after introducing E-procurement: (ই-প্রকিউরমেন্ট কোটেশন সংগ্রহে কত সময় লেগেছে?)

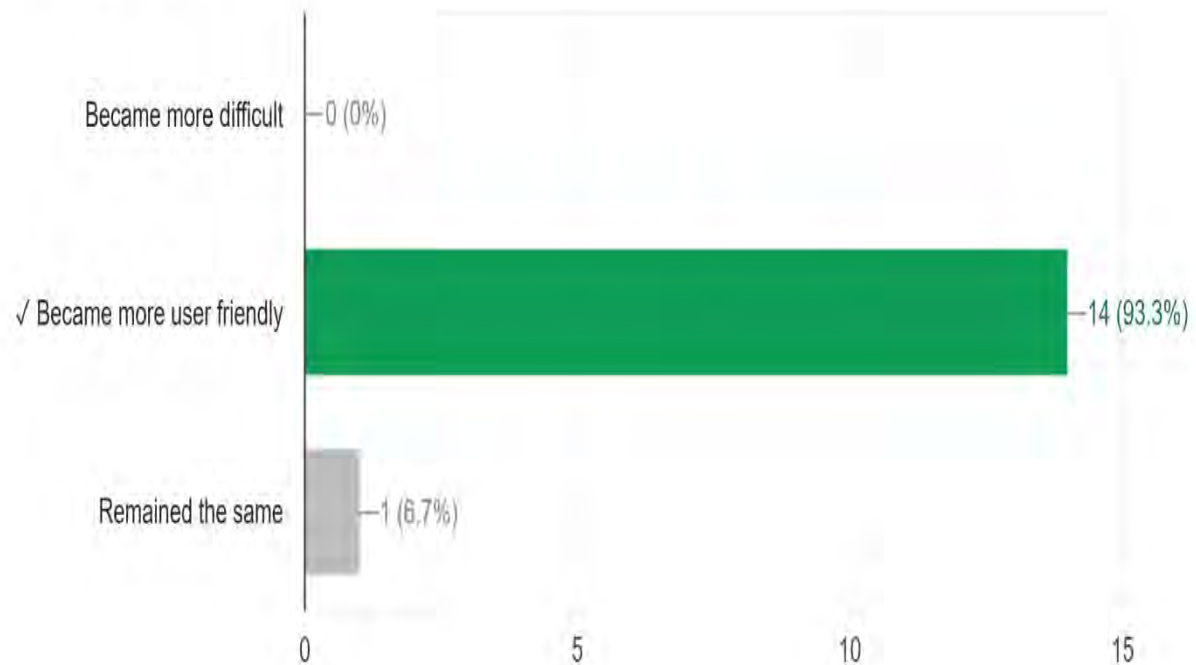
12 / 15 correct responses



Findings: Suppliers responded that the time for preparing quotations has decreased. 80% of them are in favor of reduced time.

B. Difficulty level for suppliers to use E-procurement software: (ই-প্রকিউরমেন্ট সফটওয়্যার ব্যবহারে সাপ্লাইয়াররা কি সমস্যা দেখছেন?)

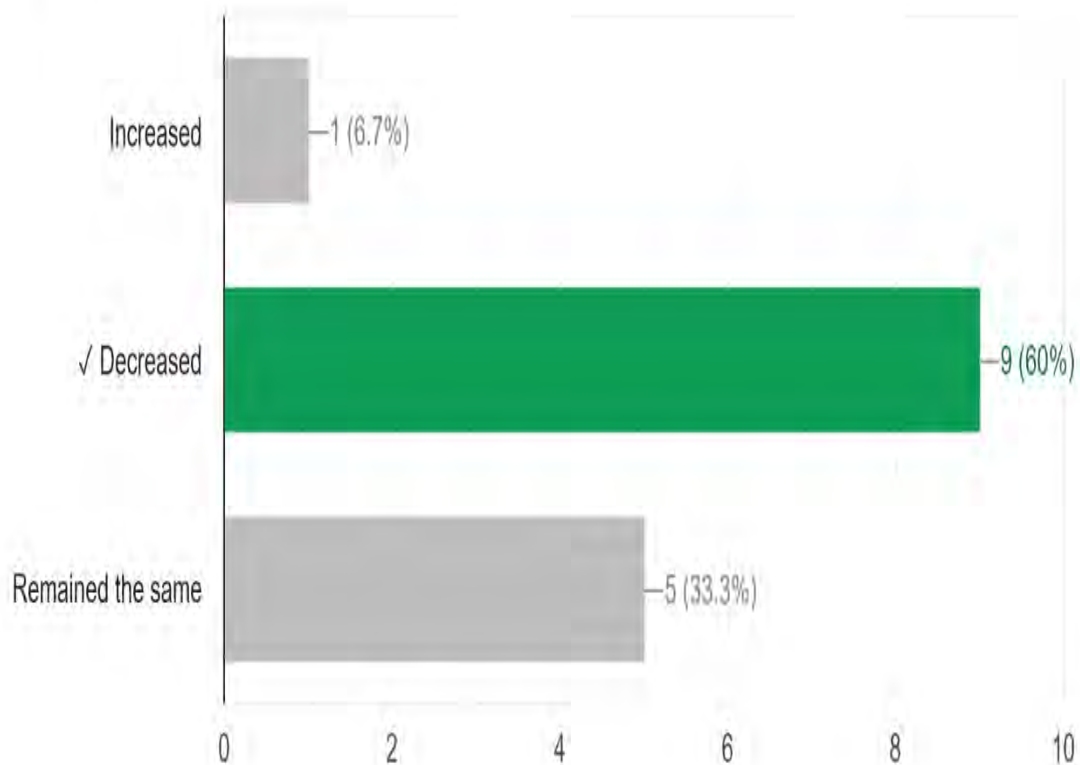
14 / 15 correct responses



Findings: A total of 93% of participants (Suppliers) are in a consensus that E-Procurement process through software became more user friendly than manual process.

C. The cost of quotation preparation after using software: (সফটওয়্যার ব্যবহারের ফলে সরবরাহ সংক্রান্ত ব্যয় বাড়ছে না কমছে?)

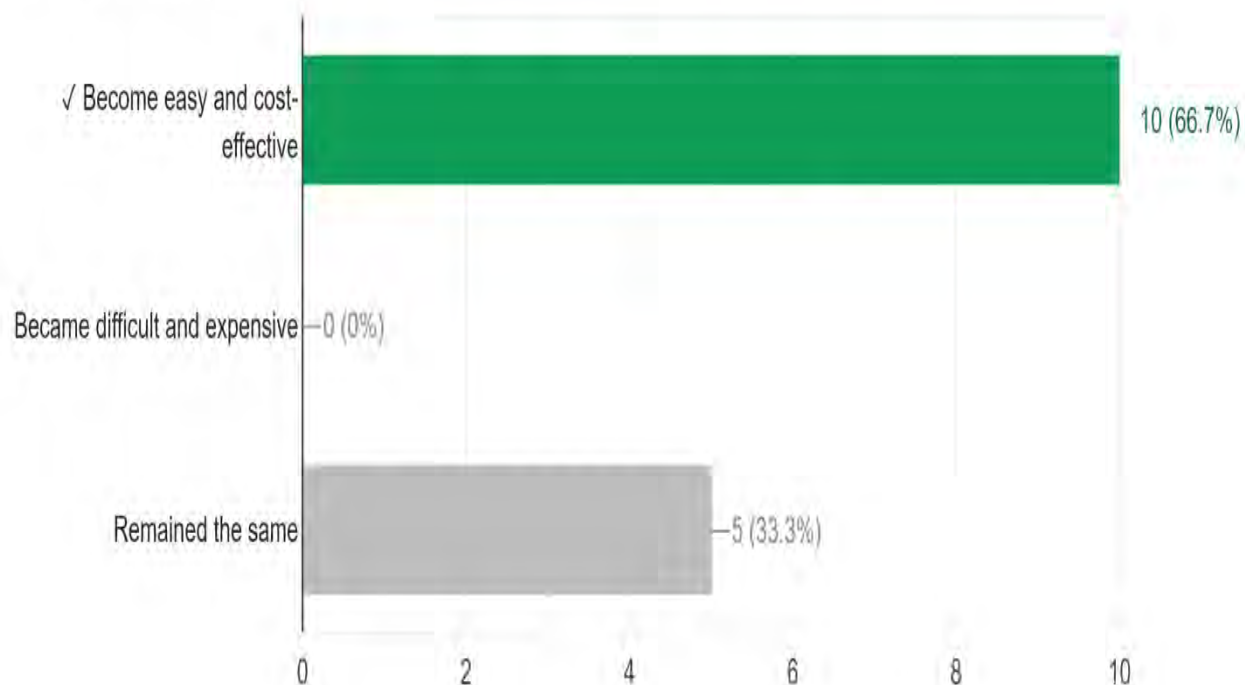
9 / 15 correct responses



Findings: 60% participants thinks the cost of quotation preparation is decreased while 33% participants thinks it has remained same and, rest 6.7% thinks cost has increased.

D. Payment receiving process difficulty and time after E-procurement was introduced: (পেমেন্ট প্রক্রিয়া ও সময় কতখানি সহজ ও সাশ্রয়ী হয়েছে?)

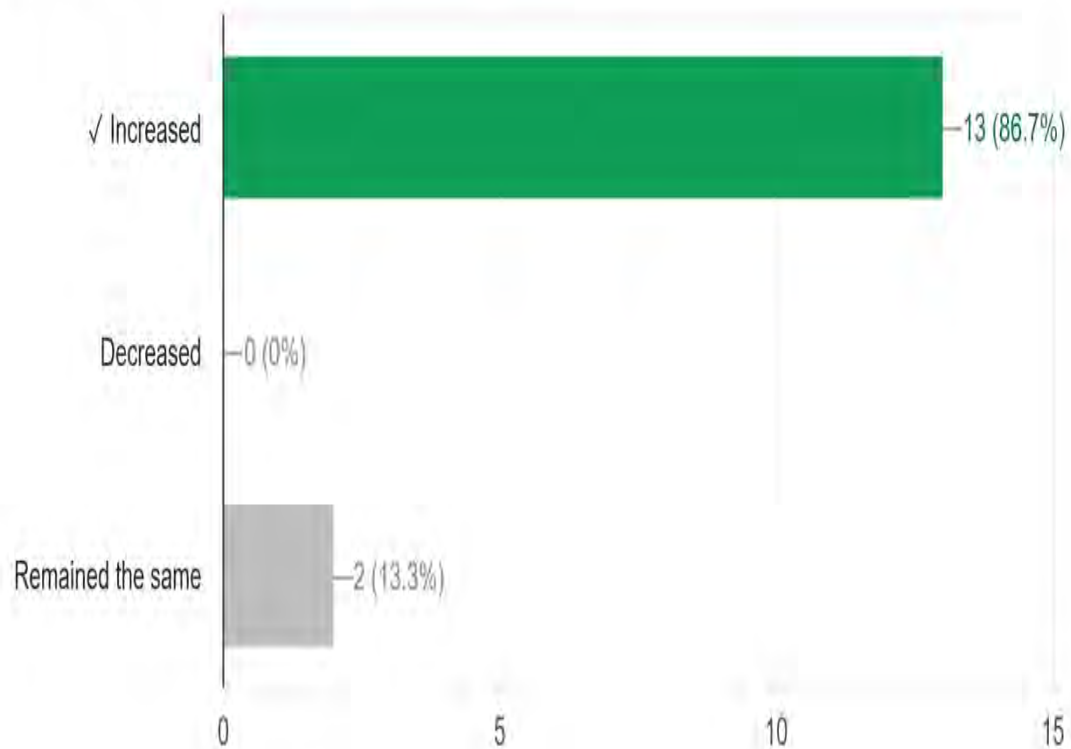
10 / 15 correct responses



Findings: 66.7% suppliers think their payment receiving process become easy and cost effective. 33.3% suppliers opined their payment receiving process remained the same after even the introduction of Digital transaction.

E. Satisfaction level of suppliers after using E-procurement: (ই-প্রকিউরমেন্টের ফলে সাপ্লাইয়ারগণের সন্তুষ্টি বাড়ছে না কমছে?)

13 / 15 correct responses

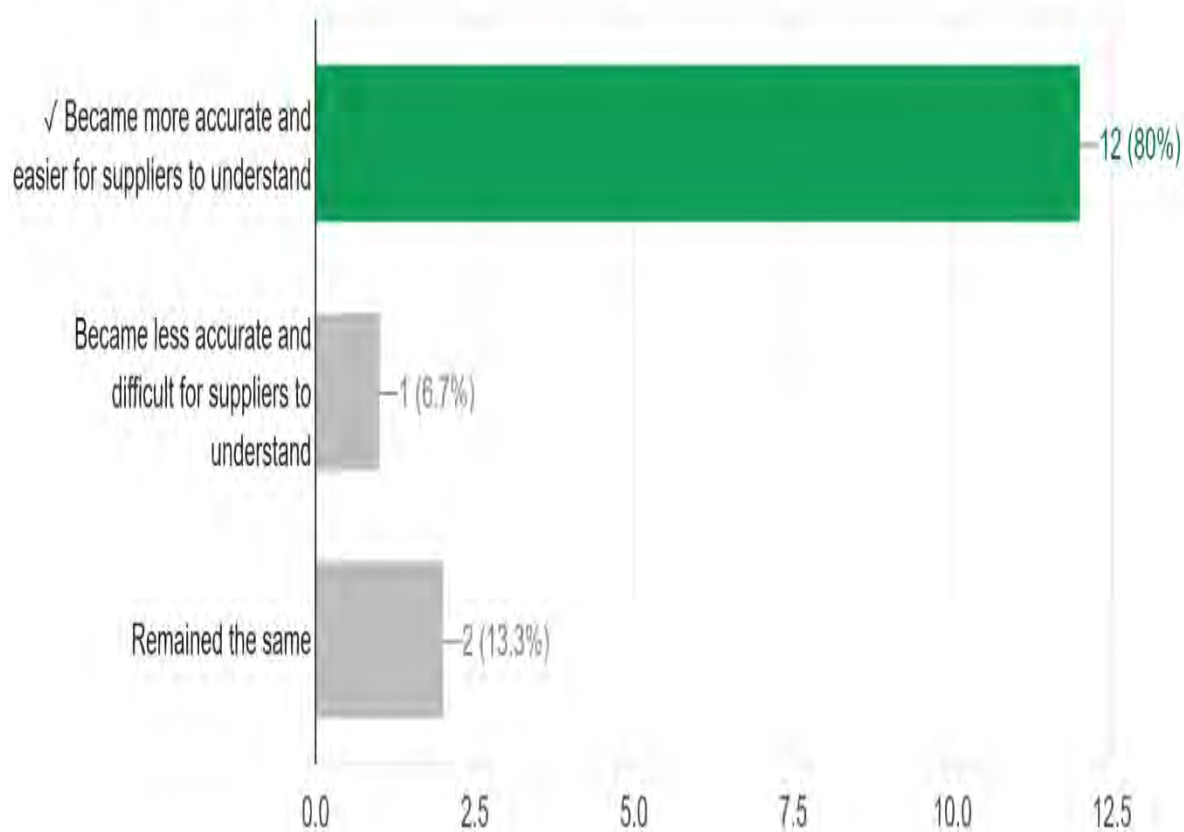


Findings: 86.7% suppliers found satisfied using E-Procurement software while 13.3% thinks it remained as it is like before.

F. Purchase order terms and conditions and data accuracy after using E-procurement became:

(শর্তাবলী ও ডাটার নির্ভুলতা বজায় রাখা যাচ্ছে কিনা?)

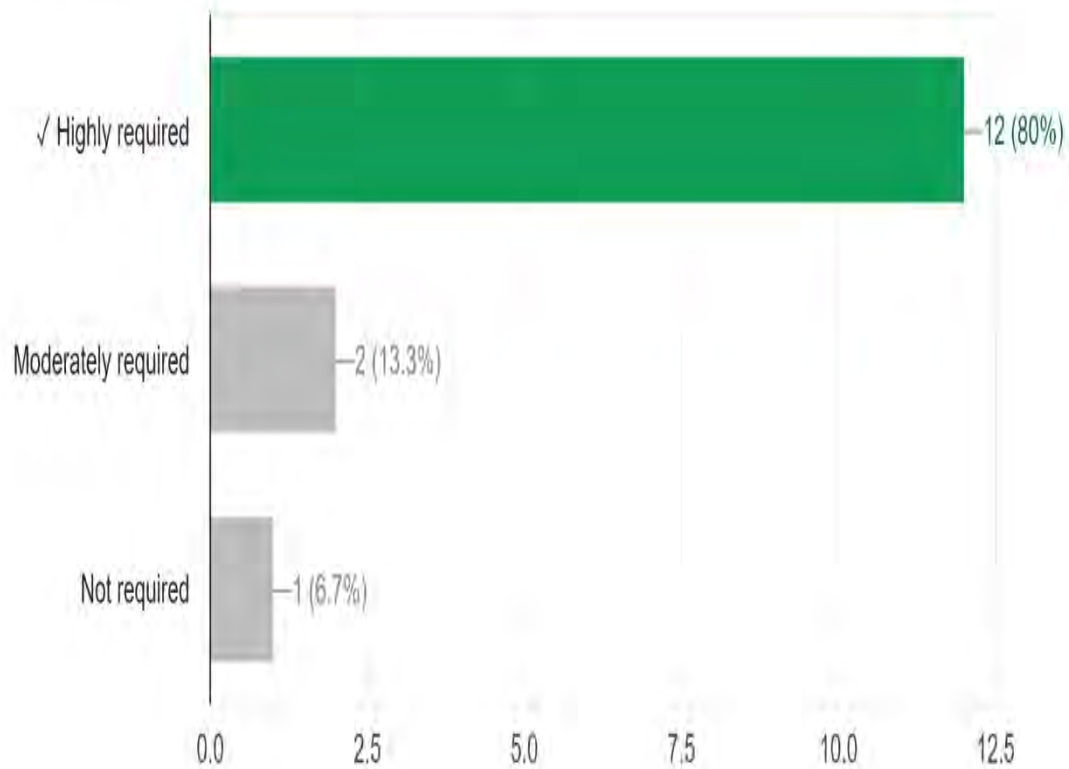
12 / 15 correct responses



Findings: 80% of suppliers thinks after digitization of supply management the process become more accurate and, easier for suppliers to understand. 13.3% thinks they found no change and only 6.7% thinks reverse of the propositions.

G. Importance of regular assessment and training by expert: (নিয়মিত প্রশিক্ষণ ও মূল্যায়নের গুরুত্ব রয়েছে কিনা?)

12 / 15 correct responses



Findings: To create a competent supplier base backed by digital process through continuous training and assessment is highly required, that support 80% of suppliers in the survey. 13.3% thinks moderately required and, only 6.7% thinks not required for training and assessment.

H. Procurer performance evaluation has become: (ক্রয় সংক্রান্ত কর্মদক্ষতা মূল্যায়ন সহজ হয়েছে কিনা?)

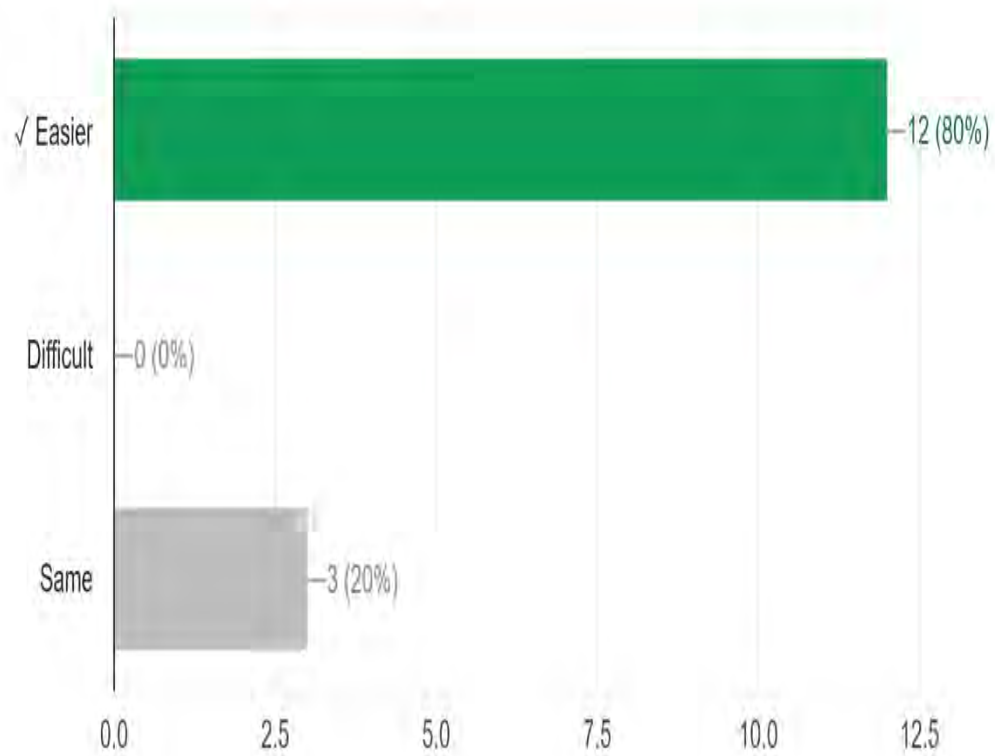
14 / 15 correct responses



Findings: the performance of procurer is easily judged by the suppliers through the digital application of supply chain process. 93% of suppliers support procurer performance evaluation has become easier. Only 6.7%

I. Contract management and monitoring has become: (চুক্তি ব্যবস্থাপনা ও পর্যবেক্ষণ সহজে হয়েছে কিনা?)

12 / 15 correct responses



Findings: total 80% suppliers of the survey said the contract management and its monitoring has become easier, while 20% of them remained in the same state.

Here, the participants have been asked to provide any further suggestions which is not mentioned in the questionnaire. Participants replied as per their understanding of the subject issue. Here I have mentioned the response below:

if you have any suggestions other than the questionnaire provided above, please share your ideas or thoughts to enhance E-Procurement and Digital Transaction as a Suppliers or Supply entity. 15 responses

- 1.No suggestion
- 2.YES
- 3.It needs to give more training.
- 6.We should do more proper practice of this automaton.
- 5.Not
- 6.E-tender is an updated version of Tender.
7. Billing systems can be further enhanced through e-procurement.
- 8.No
- 9.Transaction Process shall be more user friendly.
- 10.Need to arrange training for end user.
- 11.Need improvement
- 12.Suggested
- 13.Required More Training for Using software
- 14.Effective Training Required
- 15.More clarity regarding terms and condition and selection process is required

Chapter 04

4.1 Advantages of E -Procurement and Automation on the overall procurement and Supply Chain efficiency:

Introduction of automation provides meaningful advantages and benefits that enhance overall efficiency key advantages are given below:

Administrative Costs Savings: E-procurement automates regular tasks, like buying order creation, benefit invoicing, and clearance with approvals. This maneuver cuts manual labor, paperwork, and human errors, and have direct impact cost savings. It also invites the competition of bidders and increase negotiation ability of stakeholders and vendor optimization.

Enhanced Procurement Cycle Times: By the grace of automation the purchasing process reduces the required time at an optimized level to complete tasks early which includes requisitions, approvals, and payments. Companies are enabling them to generate quicker orders processing and effective supply chains, by outpacing traditional supply chain.

Prompt Supplier Relationships: E-transaction enhance the capacity of the business house to monitor supplier performance like delivery on times, accurate order quantity, compliance with contract terms. It helps to give a sustenance to construct and embolden supplier relationships, that ensures the vendors to meet their obligations.

Data Access for Correct Decision Making: E-procurement protocols provide real-time visibility into procurement activities, gives better chance to right decision-making. Companies track orders, monitor their spend, and gain insights into supplier performance instantly.

Less vulnerability to Fraud and Errors: digital transactions approval provides audit trails for all transactions, E-procurement systems minimize the risk of fraud and human error. It has the compliance features for internal and external regulations of the business. Easily identify non-compliant purchase.

Changing Market Response and respect for Diversity: Automated procurement offers lean, agile, Leagile and Supply resilience approaches that can adjust the emerging changing market

and its expectations including last minute demand change, helping or supply issues with minimal delays.

Promoting sustainable Supply chain: Automation offers sustainable supply chain, Paperless E-procurement and automation reduce the need for paper and cutting down on paper usage and waste.

Examples of Advantages:

Unilever achieved significant cost savings and efficiency improvements by implementing e-procurement solutions, automating processes from purchase order creation to payment processing.

Siemens, improved supplier collaboration and transparency by automating its procurement workflows, leading to faster response times and more effective risk management.

4.2 Challenges and limitations of E -Procurement and Automation on the overall procurement and Supply Chain efficiency:

Despite having tremendous advantages of automation in supply chain, there are also challenges and limitations associated with their impact.

Fusion of Automation with Existing Systems: Requires significant IT investment and technical expertise. Poor integration can lead to data silos, duplicate data entry, and errors, reducing the overall efficiency of procurement operations.

Example: Companies with outdated or incompatible software may experience delays in data synchronization and challenges in implementing new technologies.

User Adoption and Training: The mental readiness of employees to accept the changes is important. Sometime resistance found to accept the change amongst the employees. Same problems lie with suppliers to be lenient to be habituated with automation. If it happens the principal aim and the concepts of fit for purpose may be disturbed that could influence the overall performance of supply chain.

Example: In some organizations, employees may continue using manual workarounds even after the implementation of e-procurement tools, limiting the full potential of automation.

Cost of Implementation: ROI might not be immediate and could take time to materialize. For SMEs and other smaller business entrepreneurs may find the investment for automation unjustified.

Example: Companies with limited budgets may struggle to afford the implementation and necessary infrastructure updates required for full-scale automation.

Supplier Participation: The success of automation depends on the competitiveness of suppliers. If the suppliers are reluctant to participate due to the ignorance to operate the digital system that may jeopardize the performance of supply chain.

Example: In markets with suppliers who do not use digital tools, communication, and transaction processing may remain manual, slowing down procurement efficiency.

Privacy Concerns of Data: There is a potential risks of data hacking. Sensitive information, documents, contract data, automation is vulnerable without the robust security system to guard the cyberattack.

Example: A data breach in the procurement system could expose confidential supplier pricing information or contracts, creating distrust between business partners.

Supplier Relationship Management: suppliers and buyers are kept apart from individual interactions due to travelling in the digital platforms. This is a threat to collaboration and communications.

Example: Suppliers may feel undervalued if interactions are limited to automated systems, leading to reduced engagement and collaboration on strategic projects.

Data Accuracy Threat: Inaccurate and non-reliable data input can lead to disaster in healthy functioning of the process. This may hamper decision making, delays and mismatched service delivery.

Example: A company may face issues such as incorrect supplier ratings or procurement errors if the data in the system is outdated or inaccurate.

Regulatory and Compliance Issues: Failure to comply with local laws or industry-specific regulations can result in fines, legal challenges, or disruptions in supply chains.

Example: A multinational company operating in multiple regions may need to adjust its e-procurement tools to meet local compliance standards, which can slow down the automation process.

Global Supply Chains complexity: Cross-border complexities can reduce the efficiency gains of automation if not handled correctly. Global coordination and supplier alignment can be difficult without localized solutions.

Example: Multinational companies may face challenges in integrating suppliers from different regions into a single e-procurement platform due to differences in regulatory frameworks and operational practices.

4.3 Findings:

1. Digital Transaction offers reduced Intermediaries
2. Creates opportunity more direct connections with end consumers.
3. Vibrant customer Relationship
4. Enhance visibility
5. Options are open for Reverse logistics
6. Real time collaboration and communication with entire supply chain
7. Accurate Inventory management.
8. promotes the concepts like JIT, Agile and Fit for purpose.
9. Reduces Administrative burden and manual marketing costs.
10. E- Procurement reduces discrimination and mismanagement and promotes competitive marketplace.
11. Constant adherence to Porters Five Forces model.

4.4 Recommendations with Examples:

1.Enhanced Competition:

The business is competing each other's, once a business concept develops it must compete with existing practices of business, it has a threat of new entrants, it is vulnerable to its substitute. The buyers and suppliers are also competing for their buying and selling power. As for example we can cite the name of "Agent Hospital" in China. It is a virtual AI hospital, the technology continues to advance, there is a potential for job displacement among conventional doctors, especially for routine diagnostic and treatment tasks which are automated. The accuracy and consistency of AI doctors in at Agent Hospital have achieved 93.06%. this high accuracy and consistency rate in diagnosis and treatments could challenge the reliability of conventional doctors. AI powered Agent Hospital can diagnose and treat 10000 patients within two weeks, a task that would take human doctors at least two years.

So Digital Landscape of all aspects are promising and who knows this Agent Hospital may be outpaced one day with newer digital thoughts, we must emphasis continuous improvement on automation and digital arena to welcome competition in the coming days. Digital Transaction and E- Procurement has comparative relations with Porter's Five forces. The procurement and supply chain professionals should have constant eyes on it to cater the competitive indicators to survive in the market with agility and, address the changes and adoption of new thoughts as per consumers expectations.

2. Leapfrog Approach:

The leapfrog approach refers to a strategy where developing countries or organizations bypass intermediate stages of development or technology that were once considered necessary, and instead, adopt the most advanced or cutting-edge technologies directly. This enables them to "leap" over older technologies or methods, often leading to rapid advancement in industries, infrastructure, or governance. For example, entities leap directly to the latest innovations like from no phone infrastructure to 4G/5G wireless communication. Developing regions often leapfrog outdated, environmentally harmful practices by adopting cleaner, more sustainable technologies directly like using solar energy rather than investing in coal power plants. It has ability to capitalize on new technology trends without dealing with legacy systems.

It has some limitations like need for human capital (training and expertise) to manage and maintain advanced systems.

4.5 Conclusion:

E-procurement and automation offer significant potential to streamline procurement processes and improve supply chain efficiency, they also come with challenges that must be addressed for successful implementation. Overcoming these challenges requires careful planning, training, investment in robust technologies, and ongoing support to ensure that the full benefits of digital transformation in procurement are realized.

4.6 Bibliography:

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9. Eastern Bank Bangladesh Ltd., City Bank Bangladesh Ltd., Mastercard Bangladesh.
10. Bangladesh Denim Expo and Bangladesh Apparel Exchange (BAE).
11. Bangladesh Bureau of Statistics(BBS).
12. The Daily Star, The Prothom Alo (A Popular National Daily in Bangladesh).
13. First Hand Data from my Survey Report .

Annexure:

For Procurement related:

Timestamp	Email Address	Score	Name	E-mail	A. The time required for collecting quotation after introducing E-procurement: (ই-প্র কিউরমেন্ট সফটওয়্যার ব্যবহারে কোন সমস্যার সম্মুখীন হচ্ছেন?)	B. Difficulty level for procurement personnel to use e-procurement software: (ই-প্র কিউরমেন্ট সফটওয়্যার ব্যবহারে কোন সমস্যার সম্মুখীন হচ্ছেন?)	C. The cost of procurement process after using software: (সফটওয়্যার ব্যবহারের ফলে ক্রয় সংক্রান্ত খরচে কি প্রভাব পড়ছে?)	D. Number of quotations from different suppliers: (কতজন সাপ্লাইয়ার কোটেশনে অংশগ্রহণ করছেন?)	E. Satisfaction level of procurement personnel after using E-procurement: (ক্রয় প্রক্রিয়ার সাথে জড়িত ব্যক্তিগণ ই-প্র কিউরমেন্টে সন্তুষ্ট কিনা?)
	muhammadriyadh10@gmail.com	14 / 24			Remained the same	Remained the same	Increased	Increased	Increased
11/7/2024 13:09	bbreadbd@gmail.com	17 / 24	Shafakat Nayem	shafakat.nayem@g.bracu.ac.bd	Time Decreased	Became more user friendly	Increased	Increased	Increased
11/7/2024 14:48	md.ferdous.wahid@g.bracu.ac.bd	22 / 24	Md. Ferdous Wahid	wahid.060009@gmail.com	Time Decreased	Became more user friendly	Decreased	Increased	Increased
11/7/2024 17:03	talebmiyah@gmail.com	20 / 24	Md. Abu Taleb	talebmiyah@gmail.com	Remained the same	Became more user friendly	Decreased	Increased	Increased
11/9/2024 9:45	rouf.shohag@gmail.com	15 / 24	Md. Abdur Rouf	md.abdur.rouf@g.bracu.ac.bd	Time Decreased	Remained the same	Remained the same	Increased	Increased

11/10/2024 11:26	muntasir@june5bd.com	22 / 24	G M Muntasir Hasan	muntasir@june5bd.com	Time Decreased	Became more user friendly	Decreased	Increased	Increased
11/10/2024 15:18	mobasherbd@gmail.com	22 / 24	Mohammed Mobasher Hossain	mobasherbd@gmail.com	Time Decreased	Became more user friendly	Decreased	Increased	Increased
11/10/2024 23:05	pdngdridp@gmail.com	17 / 24	Md Mansur Ali	mdmansur1574@gmail.com	Time Decreased	Became more user friendly	Decreased	Increased	Increased
11/11/2024 11:50	moktar031061@gmail.com	19 / 24	Md. Moktar Hossain	moktar031061@gmail.com	Time Decreased	Became more user friendly	Decreased	Increased	Increased
11/11/2024 15:32	sarkerhafiz@gmail.com	20 / 24	Wg Cdr Hafiz (retd)	sarkerhafiz@yahoo.com	Time Decreased	Became more user friendly	Decreased	Remained the same	Increased
11/13/2024 12:45	maisha.mahjabeen.haque@bracu.ac.bd	15 / 24	Maisha	mahjabeenmaisha@gmail.com	Time Decreased	Remained the same	Increased	Increased	Increased
11/14/2024 9:21	mironhosain1984@gmail.com	22 / 24	Md Miron Hossain	mironhosain1984@gmail.com	Time Decreased	Became more user friendly	Decreased	Increased	Increased

11/17/2024 11:45	engrmdza kiurrahman@gmail.com	14 / 24	Md. Zakiur Rahman	engrmdza zakiurrahman@gmail.com	Remained the same	Became more difficult	Decreased	Increased	Increased
11/17/2024 12:07	shorifulpksf@gmail.com	20 / 24	Md. Shoriful Islam	shorifulpksf@gmail.com	Time Decreased	Became more user friendly	Decreased	Decreased	Increased
11/20/2024 10:46	atdewan@gmail.com	16 / 24	Dewan Rashidul Hassan	atdewan@gmail.com	Time Decreased	Became more difficult	Remained the same	Decreased	Increased
11/27/2024 16:12	towseefgane@gmail.com	22 / 24	Towseef Khan	towseefgane@gmail.com	Time Decreased	Became more user friendly	Decreased	Increased	Increased
11/27/2024 17:00	ashequr95@gmail.com	15 / 24	Ashequr Rahman	ashequr.rahman@intelli.com	Remained the same	Became more user friendly	Decreased	Remained the same	Increased

F. Supply chain inventory handling and data keeping became: (ইনভেন্টরি/ডাটা সংগ্রহ সহজ ও সঠিকভাবে হচ্ছে কিনা?)	G. Purchase order terms and conditions and data accuracy after using E-procurement became: (ক্রয়াদেশ শর্তাবলী ও ডাটার নির্ভুলতা বজায় রাখা হচ্ছে কিনা?)	H. Importance of regular assessment and training by expert: (নিয়মিত প্রশিক্ষণ ও মূল্যায়নের গুরুত্ব রয়েছে কিনা?)	I. Supplier performance evaluation has become: (সাপ্লাইয়ারদের কর্মদক্ষতা মূল্যায়ন সহজ হয়েছে কিনা?)	J. Contract management and monitoring has become: (চুক্তি ব্যবস্থাপনা ও পর্যবেক্ষণ সহজে হয়েছে কিনা?)	if you have any suggestions other than the questionnaire provided above please share your ideas or thoughts to enhance E-Procurement and Digital Transaction as a procurement official or entity.
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More accurate	Became More accurate and easier for suppliers to understand	Highly required	Same	Easier	
More accurate	Became More accurate and easier for suppliers to understand	Moderate required	Easier	Easier	I think the view varies person to person, some skilled yet old procurement personnel might be used to with the manual system, and change management is always a difficult thing, but after using e-procurement system it will surely save time and increase competition since suppliers from distance can also participate in this kind of system.
More accurate	Became More accurate and easier for suppliers to understand	Highly required	Easier	Easier	Need make the procurement process more lean and continuous improvement of the process.
More accurate	Became More accurate and easier for suppliers to understand	Highly required	Easier	Easier	None
More accurate	Became More accurate and easier for suppliers to understand	Moderate required	Easier	Easier	E-procurement is modern & standard method

More accurate	Became More accurate and easier for suppliers to understand	Highly required	Easier	Easier	e procurement process is more transparent than manual process.
More accurate	Became More accurate and easier for suppliers to understand	Highly required	Easier	Easier	Quality parameters should be incorporated in the process
Accurate but difficult	Became More accurate and easier for suppliers to understand	Highly required	Difficult	Easier	We should make more question of sustainable procurement
Accurate but difficult	Became More accurate and easier for suppliers to understand	Highly required	Easier	Easier	It is more transparent system which can ensure more participation in tendering process. It can ensure the compliance with public procurement principles.

More accurate	Became More accurate and easier for suppliers to understand	Highly required	Easier	Easier	For tactical level procurement, eprocurement concept has not yet become popular. The reasons behind that are, reluctance to use device and software by both the sellers and buyers, cost of device and software is high comparing to volume/amount of purchase, ignorance in soft knowledge etc. But for operational and strategic procurement including foreign purchases of major platforms, equipment, raw materials etc became very easy and lead time has been reduced tremendously after induction of eprocurement by govt organizations and corporate bodies.
Accurate but difficult	Became More accurate and easier for suppliers to understand	Highly required	Easier	Easier	N/A
More accurate	Became More accurate and easier for suppliers to understand	Highly required	Easier	Easier	Provide mobile banking access that help to increase digital transaction

More accurate	Became More accurate and easier for suppliers to understand	Highly required	Same	Same	1. Verification of documents should be added in this system. 2. Release of tender security should be automated. 3 here password is used as digital signature figure print or digital signature may be used
More accurate	Became More accurate and easier for suppliers to understand	Highly required	Easier	Easier	Digital system should be incorporated in every sector of Bangladesh.
More accurate	Became More accurate and easier for suppliers to understand	Highly required	Easier	Easier	The training from EGP is running is useless unless one supplier be familiar with submission systems. Maximum EGP user is dependent on other guy where is every company representative should get how to operate total system, but training is for knowing what is procurement system and law.
More accurate	Became More accurate and easier for suppliers to understand	Highly required	Easier	Easier	Initiative of transforming digitalize is very good step as the whole world are moving faster in case of technology so all the service should be transform to digitalize
More accurate	Became More accurate and easier for suppliers to understand	Moderate required	Easier	Easier	N/A

For Suppliers:

Timestamp	Email Address	Score	Name	E-mail	A. The time required for preparing quotation after introducing E-procurement: (ই-প্র কিউরমেন্ট কোটেশন সংগ্রহে কত সময় লেগেছে?)	B. Difficulty level for suppliers to use E-procurement software: (ই-প্র কিউরমেন্ট সফটওয়্যার ব্যবহারে সাপ্লাইয়াররা কি সমস্যা দেখছেন?)	C. The cost of quotation preparation after using software: (সফটওয়্যার ব্যবহারের ফলে সরবরাহ সংক্রান্ত ব্যয় বাড়ছে না কমছে?)
11/9/2024 18:34	enr.mohir@gmail.com	15 / 21	Md. Mohir Uddin Sheikh	enr.mohir@gmail.com	Time Decreased	Became more user friendly	Remained the same
11/10/2024 10:35	leonchowdhury0852@gmail.com	13 / 21	LEON CHOWDHURY	LEONCHOWDHURY0852@GMAIL.COM	Time Increased	Became more user friendly	Remained the same
11/10/2024 20:05	m.a.mannan@g.bracu.ac.bd	19 / 21	M A Mannan	m.a.mannan@g.bracu.ac.bd	Time Decreased	Became more user friendly	Decreased
11/22/2024 18:17	absolute.sumon@gmail.com	15 / 21	Md.Bulbul Ahmad	absolute.sumon@gmail.com	Time Decreased	Became more user friendly	Decreased
11/22/2024 18:53	mahirmohon@gmail.com	19 / 21	Mohammad Siddiqur Rahman	mahirmohon@gmail.com	Time Decreased	Became more user friendly	Decreased
11/22/2024 21:46	touhidakram2015@gmail.com	16 / 21	Md. Touhid Akram	touhidakram2015@gmail.com	Time Decreased	Became more user friendly	Decreased
11/23/2024 10:23	moududahmed1986@gmail.com	17 / 21	Moudud Ahmed	moududahmed1986@gmail.com	Time Decreased	Became more user friendly	Remained the same

11/23/2024 19:48	ahmad0191@gmail.com	15 / 21	Bulbul ahmad	ahmad0191@gmail.com	Time Decreased	Became more user friendly	Remained the same
11/27/2024 15:20	service@june5bd.com	19 / 21	June 5 Communications	service@june5bd.com	Time Decreased	Became more user friendly	Decreased
11/27/2024 15:51	farhanatania27@gmail.com	16 / 21	Farhana Wahid	farhanatania27@gmail.com	Time Decreased	Became more user friendly	Decreased
11/27/2024 16:13	aasad.sm@gmail.com	0 / 21	SM Asad	aasad.sm@gmail.com	Remained the same	Remained the same	Remained the same
11/27/2024 16:17	sajolislam270@gmail.com	13 / 21	Md Sajol Islam	sajolislam270@intel.lier.com	Time Increased	Became more user friendly	Increased
11/27/2024 17:16	todewan@gmail.com	19 / 21	Dewan Rashidul Hassan	awsring@gmail.com	Time Decreased	Became more user friendly	Decreased
11/27/2024 17:43	thestateitbd@gmail.com	19 / 21	SAZZADU L BASHIR	thestateitbd@gmail.com	Time Decreased	Became more user friendly	Decreased
11/28/2024 10:12	kamol4k2@gmail.com	13 / 21	Md. Mahmood Hasan Khan	kamol4k2@gmail.com	Time Decreased	Became more user friendly	Decreased

9	D. Payment receiving process difficulty and time after E-procurement was introduced: (পেমেন্ট প্রক্রিয়া ও সময় কতখানি সহজ ও সাশ্রয়ী হয়েছে?)	E. Satisfaction level of suppliers after using E-procurement: (ই-প্রকিউরমেন্টের ফলে সাপ্লাইয়ারগণের সন্তুষ্টি বাড়ছে না কমছে?)	F. Purchase order terms and conditions and data accuracy after using E-procurement became: (শর্তাবলী ও ডাটার নির্ভুলতা বজায় রাখা যাচ্ছে কিনা?)	G. Importance of regular assessment and training by expert: (নিয়মিত প্রশিক্ষণ ও মূল্যায়নের গুরুত্ব রয়েছে কিনা?)	H. Procurer performance evaluation has become: (ক্রয় সংক্রান্ত কর্মদক্ষতা মূল্যায়ন সহজ হয়েছে কিনা?)	I. Contract management and monitoring has become: (চুক্তি ব্যবস্থাপনা ও পর্যবেক্ষণ সহজে হয়েছে কিনা?)	if you have any suggestions other than the questionnaire provided above please share your ideas or thoughts to enhance E-Procurement and Digital Transaction as a Suppliers or Supply entity.
	Become easy and cost-	Increased	Remained the same	Highly required	Easier	Easier	No suggestion
	Remained the same	Increased	Became more accurate and easier for suppliers to understand	Highly required	Easier	Easier	YES
	Become easy and cost-effective	Increased	Became more accurate and easier for suppliers to understand	Highly required	Easier	Easier	It needs to give more training.
	Remained the same	Increased	Became more accurate and easier for suppliers to understand	Highly required	Easier	Same	We should do more proper practice of this automation.
	Become easy and cost-effective	Increased	Became more accurate and easier for suppliers to understand	Highly required	Easier	Easier	Not

Become easy and cost-effective	Increased	Became more accurate and easier for suppliers to understand	Moderately required	Easier	Easier	E-tender is an updated version of Tender.
Become easy and cost-effective	Increased	Became more accurate and easier for suppliers to understand	Highly required	Easier	Easier	1. Billing systems can be further enhanced through e-
Remained the same	Increased	Became more accurate and easier for suppliers to understand	Highly required	Easier	Easier	No
Become easy and cost-effective	Increased	Became more accurate and easier for suppliers to understand	Highly required	Easier	Easier	Transaction Process shall be more user friendly.
Become easy and cost-effective	Increased	Became more accurate and easier for suppliers to understand	Moderately required	Easier	Easier	Need to arrange training for end user.
Remained the same	Remained the same	Remained the same	Not required	Same	Same	Need improvement
Remained the same	Increased	Became more accurate and easier for suppliers to understand	Highly required	Easier	Easier	Suggested

Become easy and cost-effective	Increased	Became more accurate and easier for suppliers to understand	Highly required	Easier	Easier	Required More Training for Using software
Become easy and cost-effective	Increased	Became more accurate and easier for suppliers to understand	Highly required	Easier	Easier	Effective Training Required
Become easy and cost-effective	Remained the same	Became less accurate and difficult for suppliers to understand	Highly required	Easier	Same	More clarity regarding terms and condition and selection process is required