E-Commerce

BCA VI SEM

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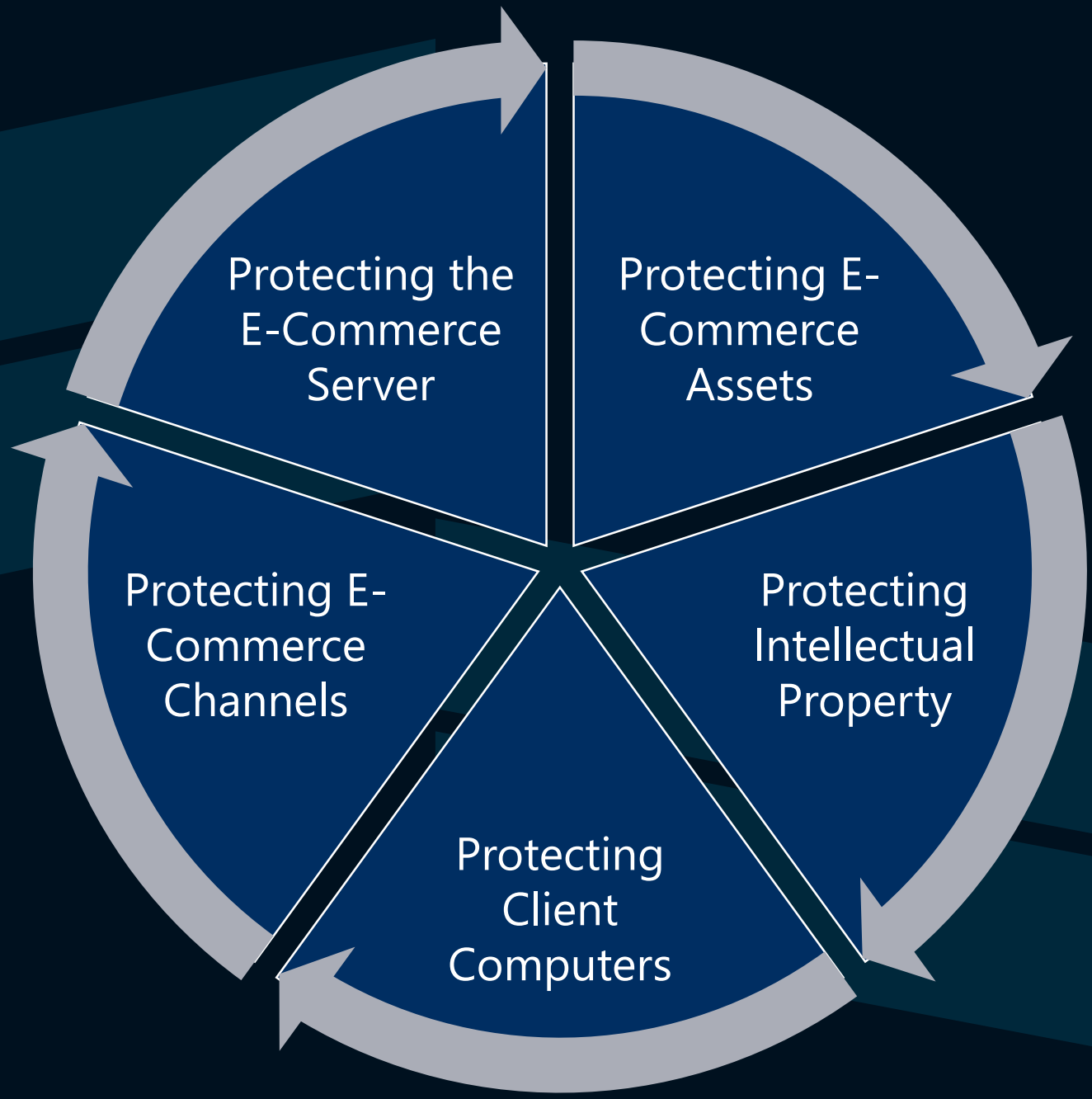
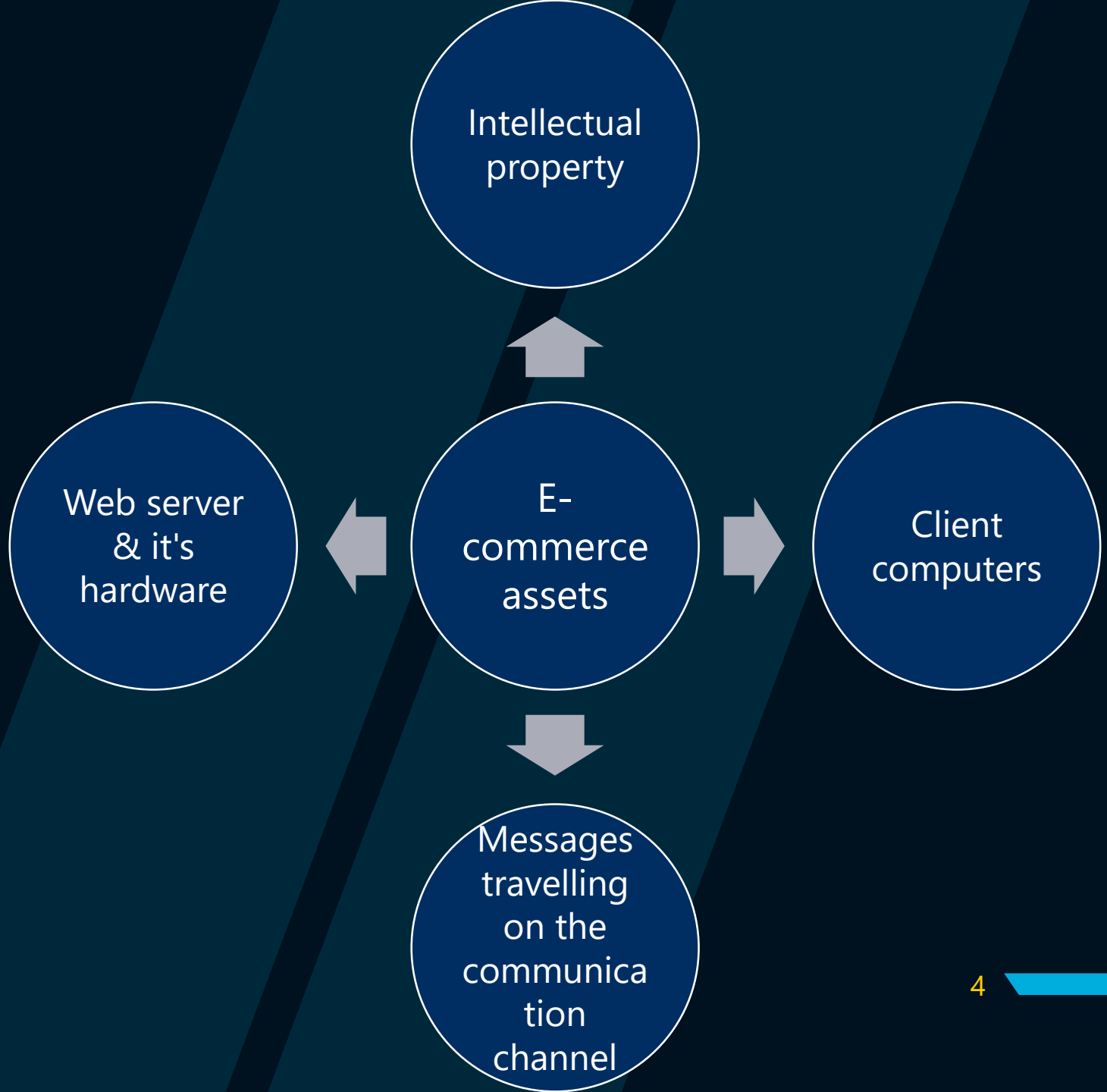
Public Policy From Legal Issues to Privacy Unit IV


Protecting the E-Commerce Server
Protecting E-Commerce Assets
Protecting Intellectual Property
Protecting Client Computers
Protecting E-Commerce Channels

Protecting E-Commerce Assets

Protecting electronic assets that comprise electronic commerce system is not an option but a necessity if commerce is to grow strong.



Protecting Intellectual Property

Intellectual Properties are the true essence of e-commerce.

They are intangible assets whose underlying value is represented not by a touchable object, but by what that asset represents.

As e-commerce increases, the risk that others may copy the look and feel of your website, some of its features or the content also increases.

There may be unauthorized use of intellectual assets.

Some examples are

E-Commerce systems, search engines or other technical internet tools may be protected by patents or utility models.	Software, including the text-based HTML code used in websites, can be protected by copyright and patents, depending on the national law.	Creative website design, content, such as written material, photographs, graphics, music and videos may be protected by copyright.	Databases can be protected by copyright.

Protecting Client Computers

Client computer must be protected from threats.

Cookies contain private information that can include credit card data, passwords, and login information.

Active contents can be one of the most serious threats to client computers.

Threats can hide in Web pages, downloaded graphics and plug-ins, E-mail attachments etc.

Client Computers are protected using

- Digital Certificates
- Browser Protection
- Antivirus Software

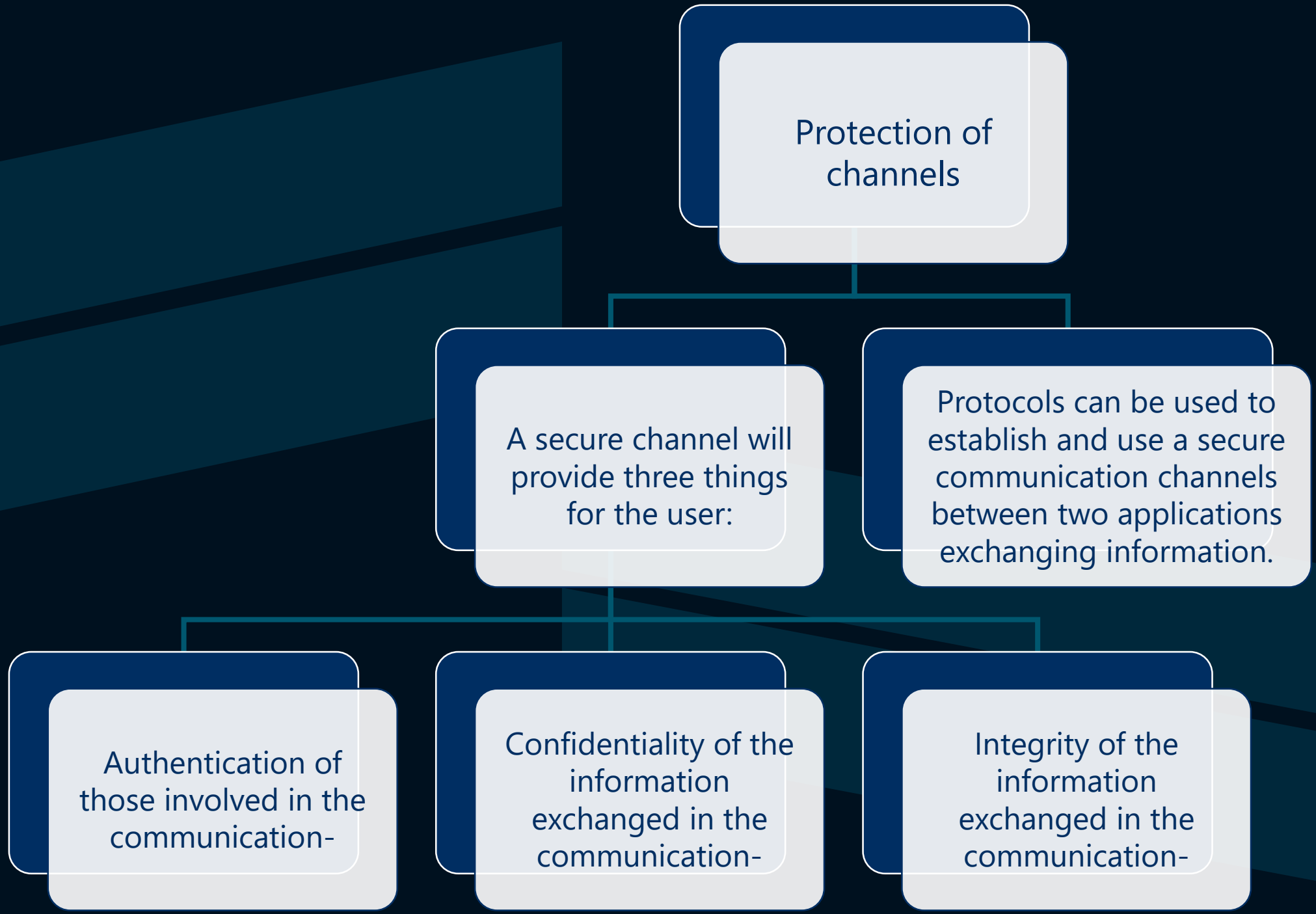
Protecting E-Commerce Channels

It means protecting assets while they are in transit between client computers and remote servers.

It includes channel secrecy, guaranteeing message integrity and ensuring channel availability.

Encryption which is the coding of information by using a mathematically based program and a secret key to produce a string of these unintelligible characters is made up of combinations of bits.

Channel Secrecy can be ensured by the use of a secure channel


Protection of channels
A secure channel will provide three things for the user:
Protocols can be used to establish and use a secure communication channels between two applications exchanging information.
Authentication of those involved in the communication-
Confidentiality of the information exchanged in the communication-
Integrity of the information exchanged in the communication-

Insuring Transaction Integrity

Transaction Integrity ensures that any illegitimate user's modification to the message can be detected.

Modification includes insertion, deletion, substitution or changes to the status of a given message.

Integrity involves guarding against improper information modification or destruction, and includes ensuring information non-repudiation and authenticity

Algorithms for Ensuring Transaction Integrity

Hash Functions:

Hash functions are effective tools to help maintain integrity.

Hash functions are used as primitive for ensuring integrity of messages and for performing mutual authentication.

Digital Signature:

An encrypted message digest is called a digital signature.

Digital signatures are easily transportable.

A digital signature is an electronic signature that can be used to authenticate the identity of the sender of a messages.

Protecting the E-Commerce Server

- The physical place where all the e-commerce transactions occur is at the Server level.
- The server can be viewed as the central repository which consists of the actual website which displays your products and services, the customer database, and the payment mechanism.
- If there are any attacks to this server, there is the potential you could lose everything. It is essential to protect the e-commerce server.

Choose a secure ecommerce platform.
Use a secure connection for checkout (SSL).
Don't store sensitive user data.
Request strong passwords from your users.
Setup system alerts for suspicious activities.
Use tracking numbers for all orders.
Always backup your system and database.
Tips to protect e-commerce site from threats

What are the various electronic commerce assets? How can we protect each of these?

Explain how transaction integrity can be ensured?

Important Questions

Electronic Payment System

Features of E-Payment

a Modes & Characteristics of Electronic Payment

UVarious Phases & benefits of an Electronic Payment

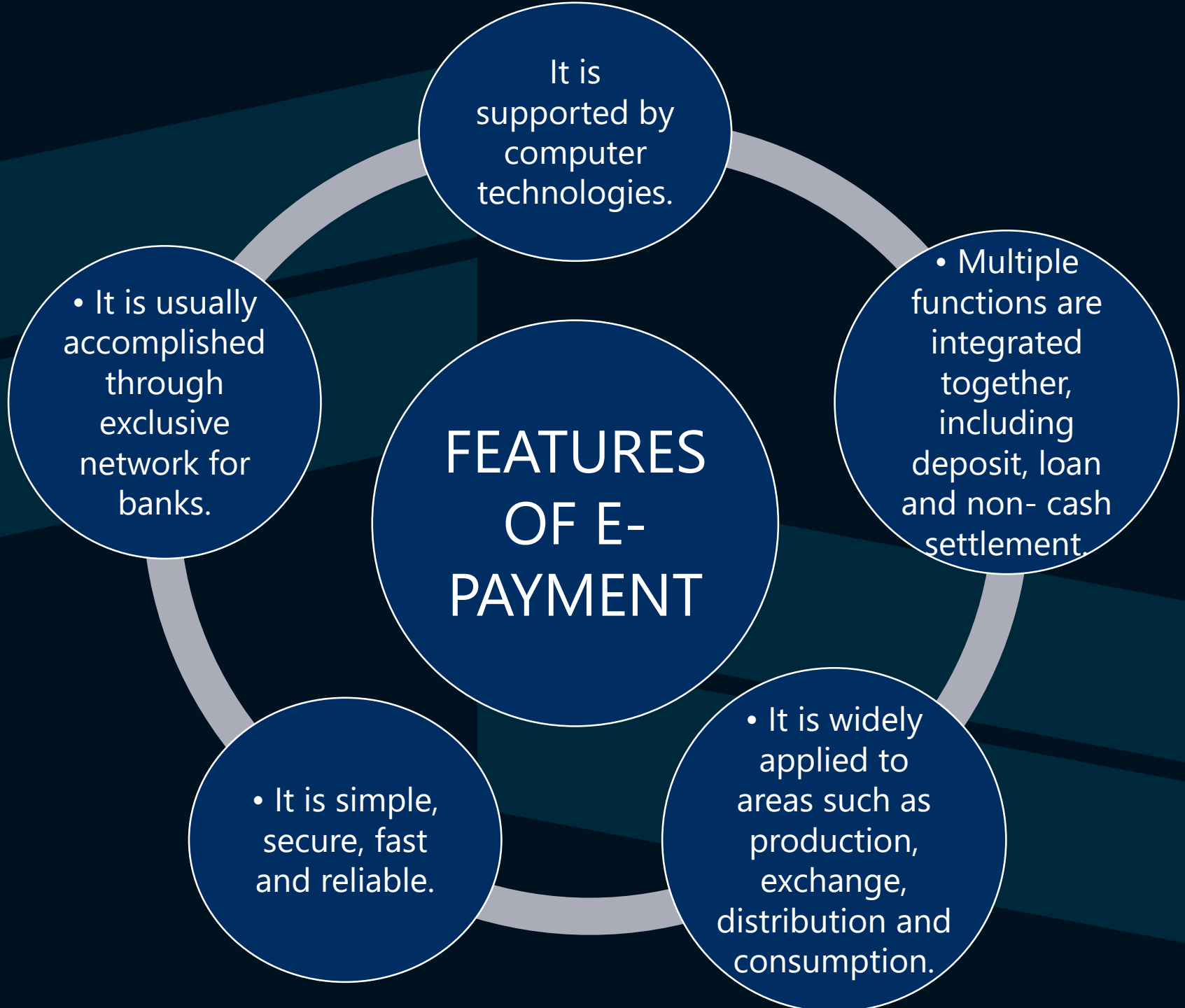
Difference between E-Paymenf & Traditional payment

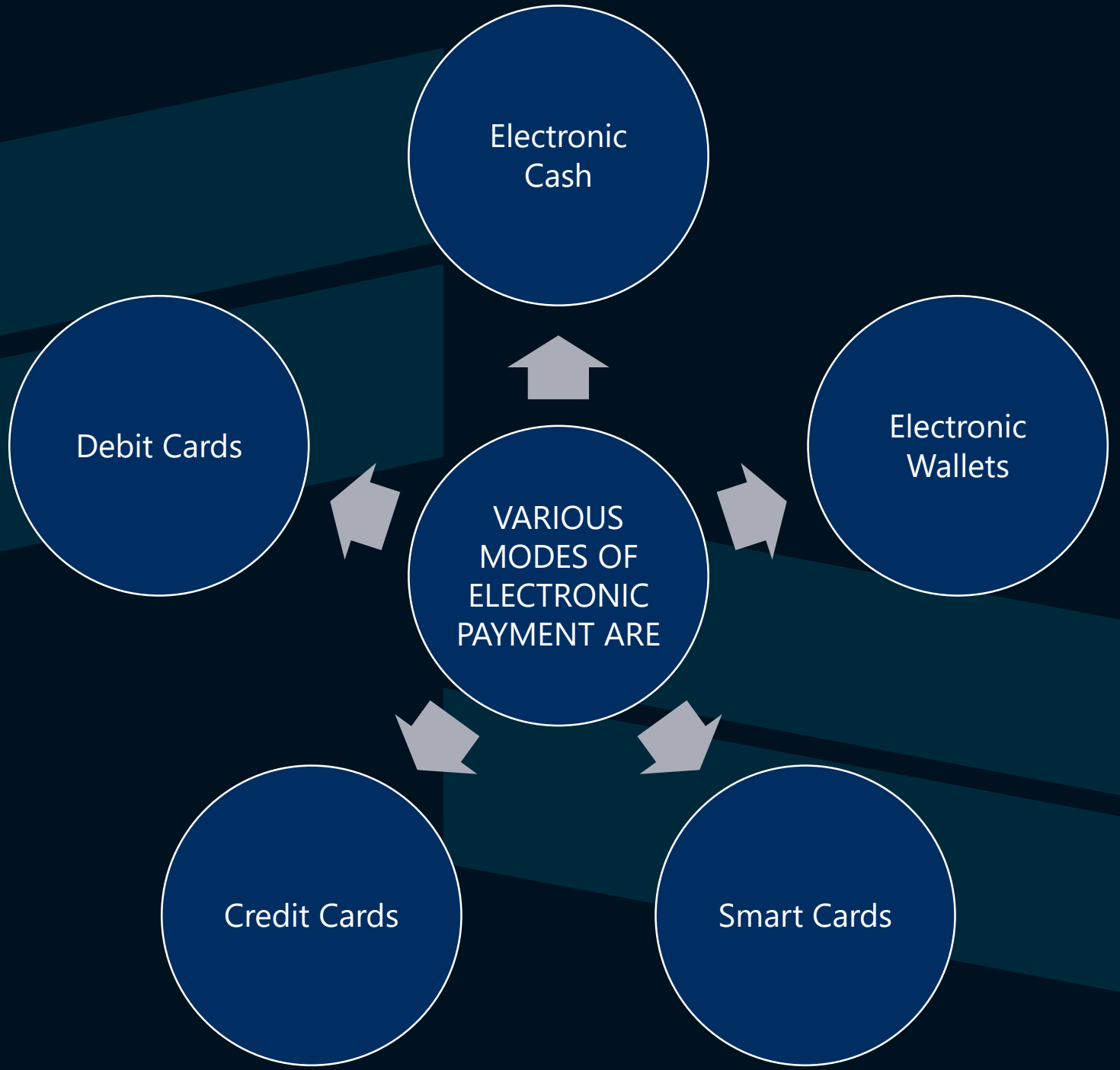
Electronic Payment is a financial exchange that takes place in an online environment.

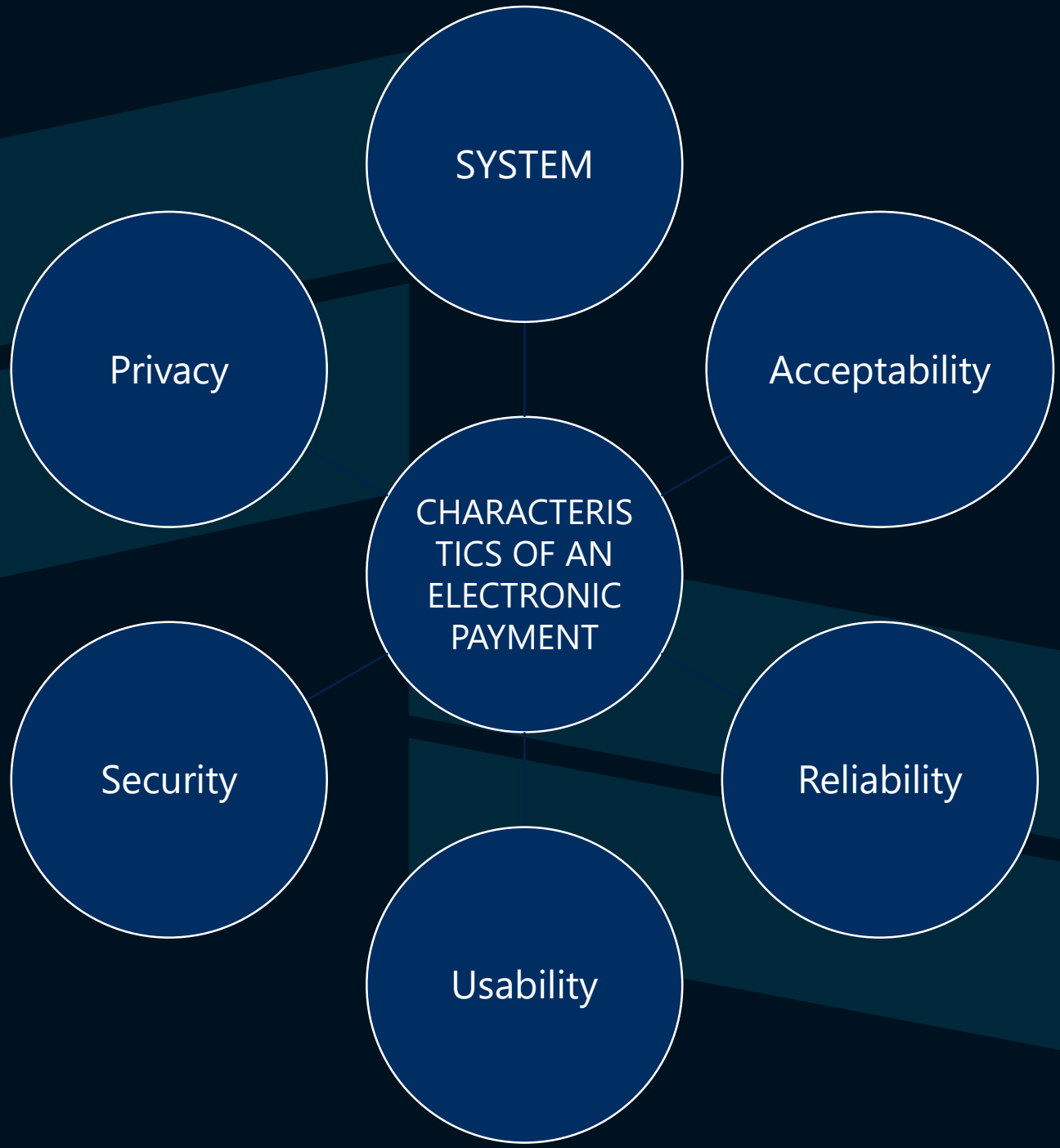
Electronic Payment is a form of a financial exchange that takes place between the buyer and the seller facilitated by means of electronic communications.

It is facilitated by a digital financial instrument such as encrypted credit card numbers, electronic cheques backed by a bank.

ELECTRONIC PAYMENT SYSTEM


It is supported by computer technologies.
• Multiple functions are integrated together, including deposit, loan and non- cash settlement.
• It is widely applied to areas such as production, exchange, distribution and consumption.
• It is simple, secure, fast and reliable.
• It is usually accomplished through exclusive network for banks.
FEATURES OF E-PAYMENT


Electronic Cash
Debit Cards
Electronic Wallets
VARIOUS MODES OF ELECTRONIC PAYMENT ARE
Credit Cards
Smart Cards


SYSTEM
Privacy
Acceptability
CHARACTERIS TICS OF AN ELECTRONIC PAYMENT
Security
Reliability
Usability

VARIOUS PHASES IN AN ELECTRONIC PAYMENT

Registration

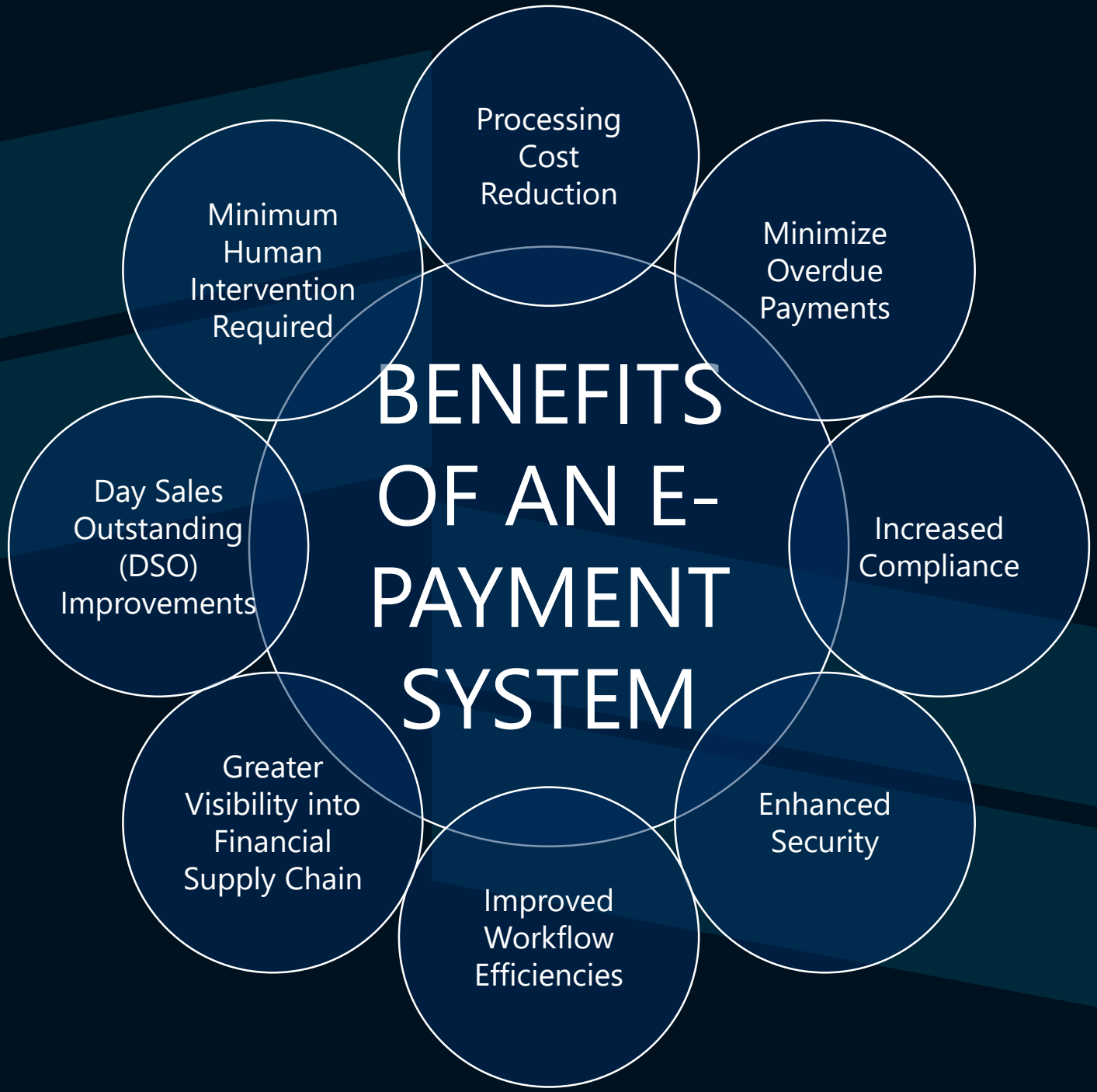
Invoicing

Payment selection and processing

Payment authorization and confirmation

ELECTRONIC PAYMENT SYSTEM VS TRADITIONAL

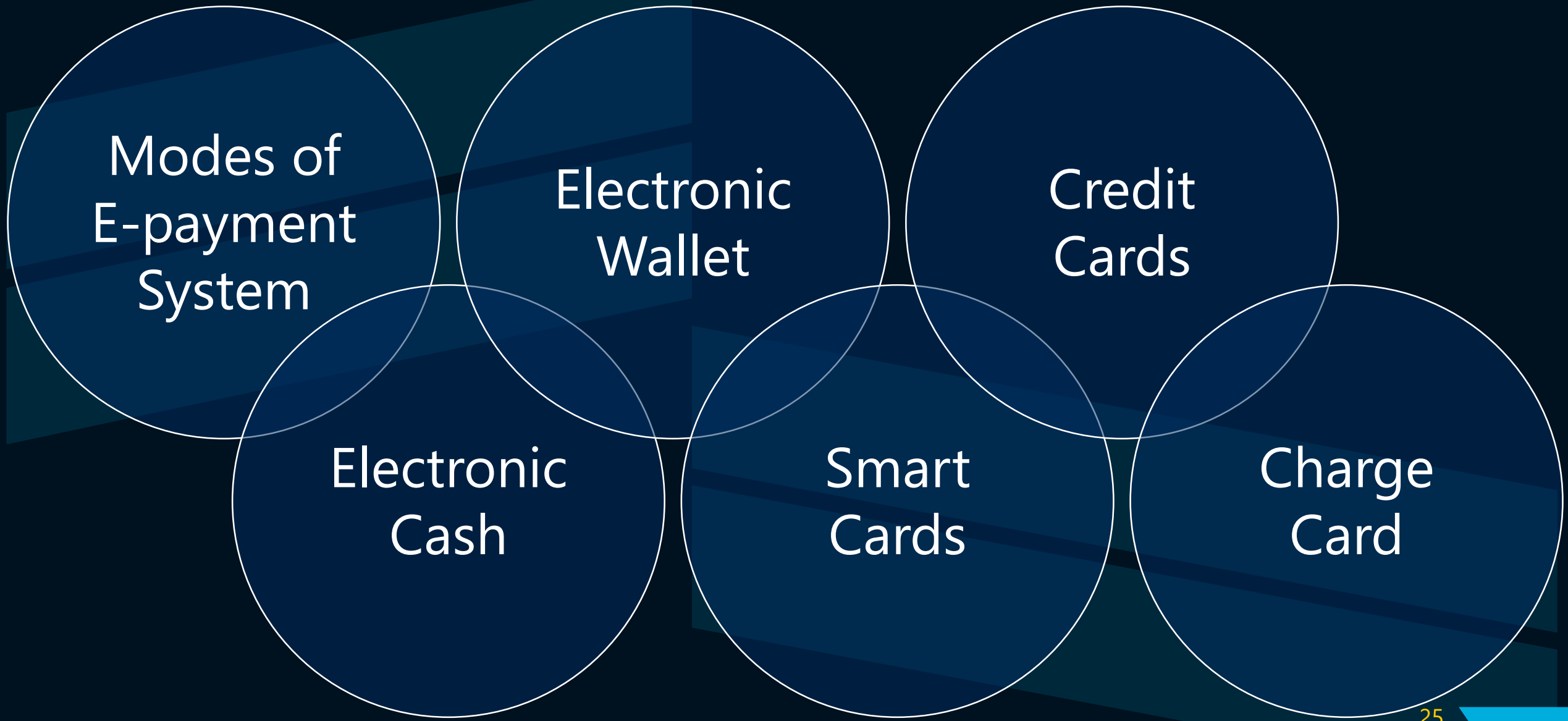
Digital circulation			Physical circulation		
Open system platform	Advanced communication means	Convenient, fast, efficient	Closed system	Traditional communication media	Not Effective


BENEFITS OF AN E-PAYMENT SYSTEM
Processing Cost Reduction
Minimize Overdue Payments
Increased Compliance
Enhanced Security
Improved Workflow Efficiencies
Greater Visibility into Financial Supply Chain
Day Sales Outstanding (DSO) Improvements
Minimum Human Intervention Required

1 Why Electronic payment system is preferred over traditional one?

2 Explain the features of Electronic payment system.

IMPORTANT QUESTIONS


Modes of E-payment System
Electronic Wallet
Credit Cards
Electronic Cash
Smart Cards
Charge Card

Modes of Electronic Payment

- Electronic Cash
- Electronic Wallets
- Smart Cards
- Credit Cards
- Charge Cards

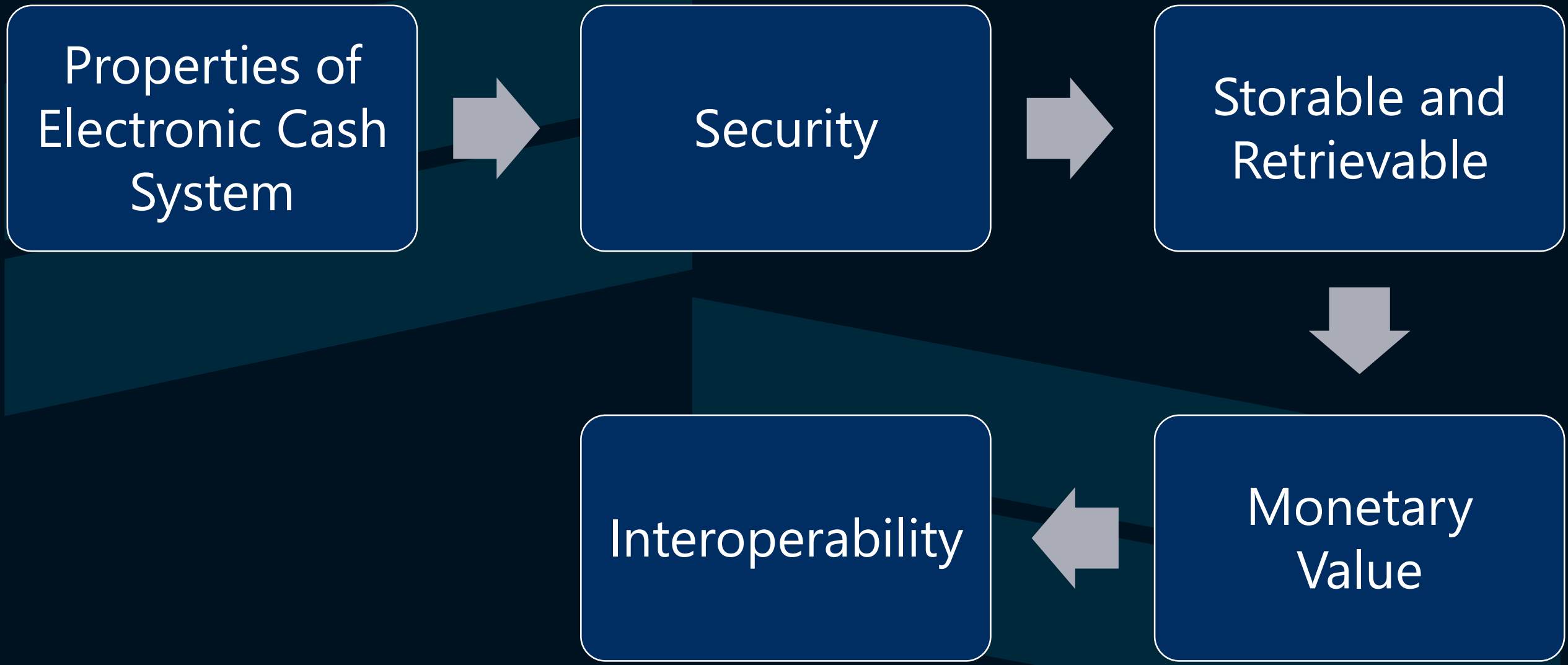
Electronic Cash is a general term that describes any value storage and exchange system created by a private entity that does not use paper documents.

It can serve as a substitute for government-issued physical currency.

Electronic Cash

Electronic cash is issued by private entities, there is a need for common standards among all e-cash issuers so that one issuer's e-cash can be accepted by another issuer.

Electronic Cash transactions are more efficient and therefore less costly than other methods thereby meaning lower prices for consumers.


Properties of Electronic Cash System
Security
Storable and Retrievable
Monetary Value
Interoperability

Electronic Wallet

An Electronic Wallet is also called Digital Wallet.

It is a piece of software that allows a user to make an electronic payment with a financial instrument.

Electronic Wallet is an encryption software that stores payment information like a traditional wallet.

It provides security and encryption for the user's personal information and for the actual transaction.

Features of Electronic Wallet

- Provides Convenience
- Hold E-cash
- Store personal and financial information
- Secure, Convenient tool

Procedure for using an E-Wallet

Decide on an electronic shop where you would like to shop.

Download a wallet from the merchant's website where you intend to shop. The special form requires the buyer to fill in some personal information.

Fill in the personal information such as your credit card number, name, address and phone number, address of shipment.

When you are ready to buy, click on the wallet button and the buying process is fully executed. Billing information is filled out automatically. You can also drag information out of the wallet and drop it into the online form.

• Smart Card is a thin, credit card-sized piece of plastic that contains a half-inch-square area that serves as the card's input/output system.

+

• This is its interface with the outside world, and handles a variety of applications.

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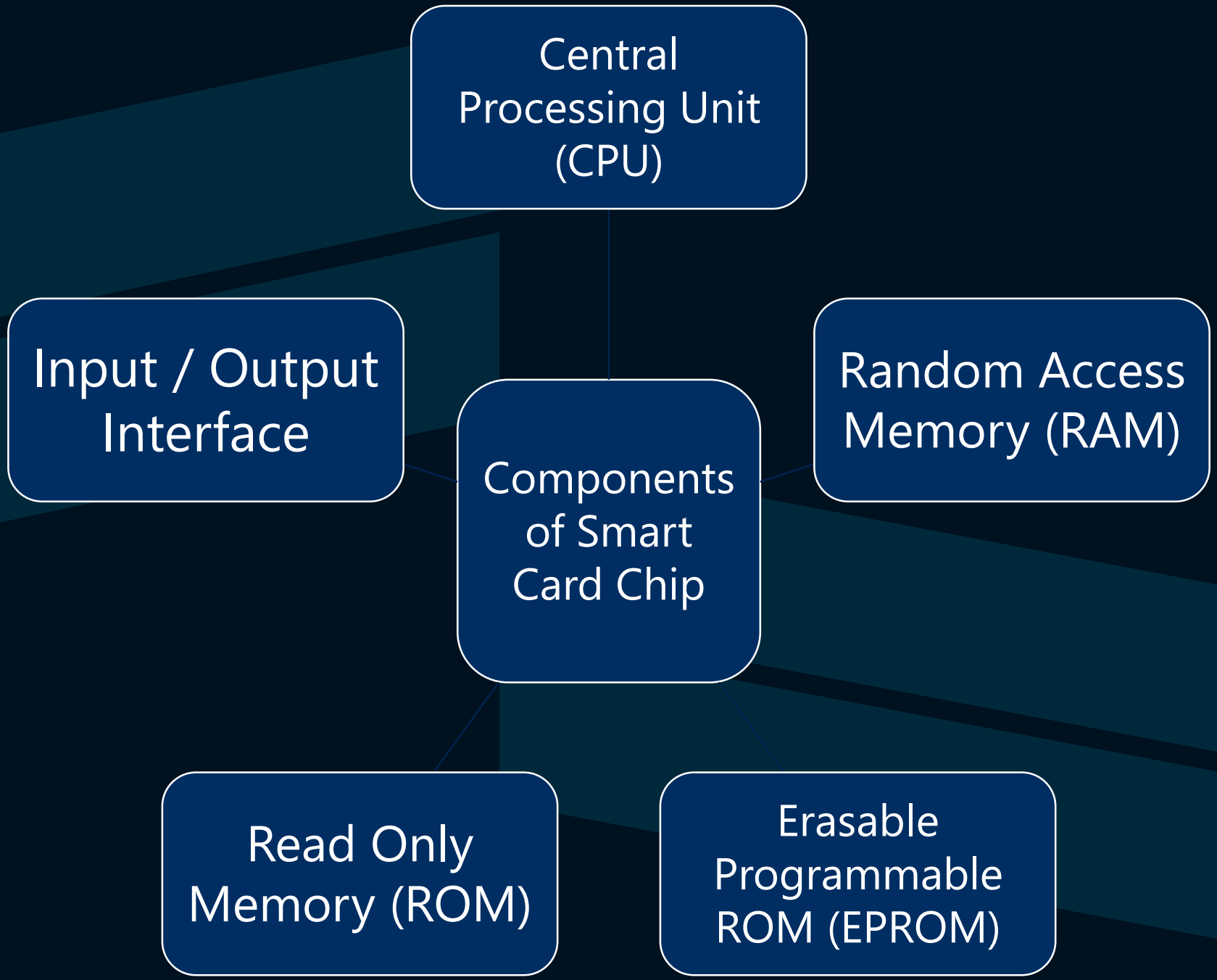
• A Smart Card contains a programmable chip, a combination of RAM and ROM storage, and an operating system of sorts, all embedded in plastic.

→ Smart Card


Central Processing Unit (CPU)
Input / Output Interface
Components of Smart Card Chip
Random Access Memory (RAM)
Read Only Memory (ROM)
Erasable Programmable ROM (EPROM)

A Smart Card is used to provide users with the ability to make a purchase. It contains stored value the cardholder can spend at retailers.

It is used to hold cash, ID information, and a key to a house or an office.

Uses of Smart Card

Smart Card is used in transaction processing. It could be loaded with cash value in ATM machines and used as a credit card.

It is used to authenticate an individual's claim of personal identification using various authentication approaches

Credit Cards is a payment card issued to users as a system of payment.

It allows the cardholder to pay for goods and services based on the holder's promise to pay for them.

Credit Cards

- The issuer of the card creates a revolving account and grants a line of credit to the consumer from which the user can borrow money for payment to a merchant or as a cash advance to theuser.

A Credit Card is a small plastic card that has a magnetic strip on the exterior.

Alternative to cash
Gifts and other offers
Credit limit
Characteristics of Credit Card
Additional charges for delay in payment
Facilitates payment in domestic and foreign currency
Record keeping of all transactions

Charge Card

A Charge Card is a like a credit card without the option to pay your balance off over time.

- With a charge card, you must pay the entire balance in full every month.

- Charge cards provide all the benefits of a credit card convenience, rewards, fraud and purchase protection, etc.

- Charge cards are similar to credit cards except they have no revolving credit line.

Advantages of Charge Card

Charge cards are unlikely to lead to card debt problems as they need to be paid off in full every month.

This kind of card may not be given a set credit limit making it easier for cardholders to buy expensive items as they need to.

Most cards come with additional rewards, discount schemes or perks for their users such as club services and various insurance plans.

Disadvantages of Charge Card

Some users find it hard to stick with the program and may end up spending more than they can afford to pay off.

Charge cards are usually reserved for individuals with a good / high credit rating.

Some cards will set minimum income levels that an individual must meet to qualify for a card.

1. Explain E-cash and E-wallets with their features and uses .

2. What do you mean by plastic money? Explain any 2 in detail.

Important Questions

THANK YOU!