

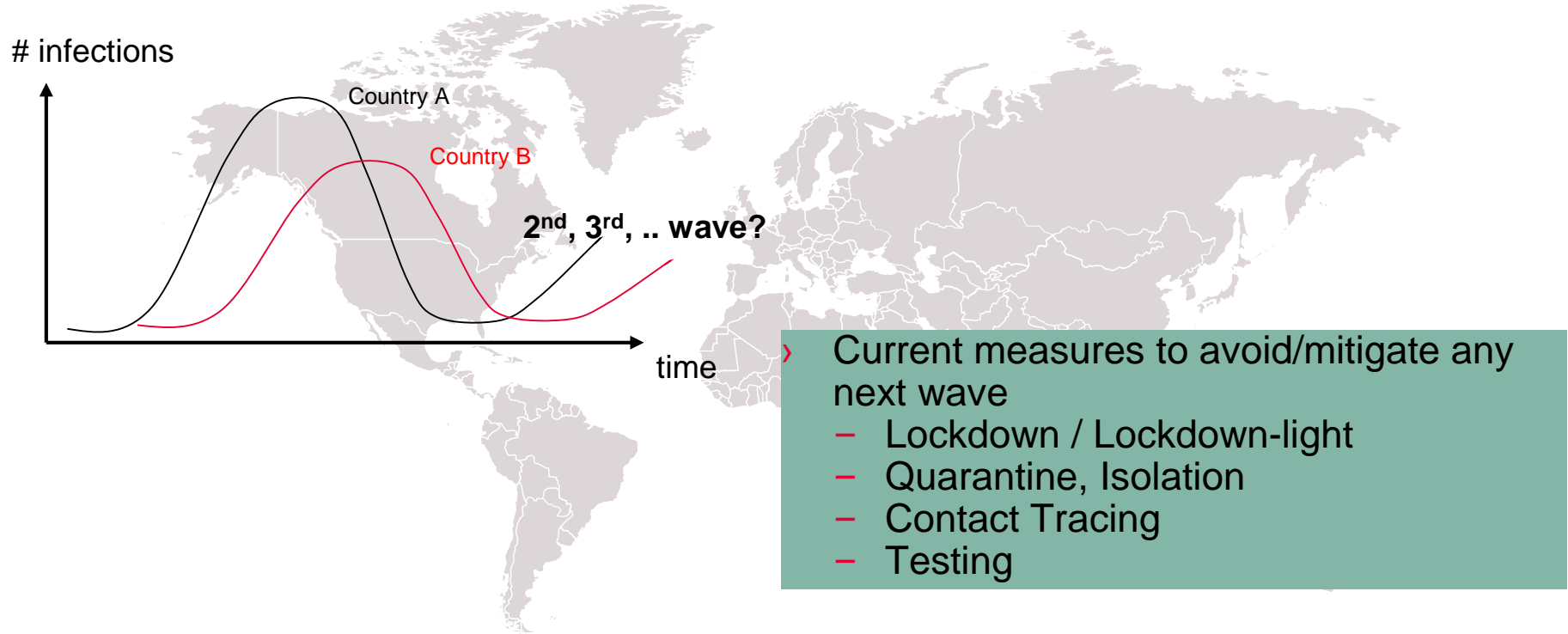
COVID-19 card – Hardware-based assistance for international travelling

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Problem Statement

COVID-19 is arresting the whole world



Negative COVID-19 test is required when crossing borders

> Negative test not older than 72h or 10 days quarantine



These individuals are required to provide an **official health certificate in German or English, not older than 72 hours (from date of conducting the test)**, which confirms that a **negative molecular biological SARS-CoV-2- test** is given. If an **official health certificate cannot be provided**, passengers are obliged to a **10 days home quarantine or a quarantine (self-isolated) in a special facility** (e.g. quarantine hotel, etc.) (Annex E or Annex F) including confirmation of availability of suitable accommodation already upon arrival, costs are to be borne by the passenger, signed by its own signature (entry and transit declaration) – otherwise entry will be refused.

[Austrian Federal Ministry]

Anlage B

Medical Certificate

In accordance with the ordinance of the Federal Minister of Social Affairs, Health, Care and Consumer Protection about measures concerning the entry from SARS-CoV-2 risk areas

This is to certify that
 (name) _____
 born _____ in _____
 has been tested on the _____ for the presence of SARS-CoV-2.

Status report of infection on the date of the test

SARS-CoV-2 pos: neg:

_____, on _____
Signature and seal of the certifying medical doctor

Applicable mark with a X

Security?

COVID-19 card



Hardware-based security

Well-established form factor

Strong identity binding

Interoperable solution

Which information are important?



- › **COVID-19 test results**
 - Test type (viral or antibody test), date, pos/neg/void, testing lab, number of antibodies
- › **COVID-19 vaccinations (when available)**
 - Date, type of serum, manufacturer, health care professional
- › **Place of residence**

COVID-19 Immunization

Immunization occurs either with an **infection** or with **vaccination**. The infected person is considered immunized for **app. 6 months**. In this case, the immunization takes place through the formation of **antibodies** in the blood. Vaccination data are not yet available.

COVID-19 Infection

The official infection numbers only show the number of identified and registered patients. Several studies have shown that the actual number of people infected is about **10 times higher**. **Many people** with an infection **show no symptoms**.

COVID-19 Vaccination

The first clinical trial with the corona vaccine candidate started in mid-June 2020. The World Health Organization (WHO) estimates **that one or two vaccines against coronavirus** will be available by the **end of the year**.

Potential beneficiaries

General

- > People which have many contacts with other persons
- > Where social/physical distancing is not possible
- > Where people are in frequent interactions with high-risk groups



Professions

- > Tourism (restaurant, hotels)
- > Transport sector (rail, aviation, taxi, seafarer)
- > Health sector (doctors, nurses, pharmacists)



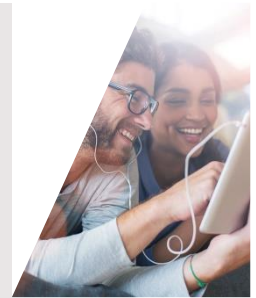
Travel

- > Business Travel
- > Long-distance travel
 - > Quarantine to be reduced from 2 weeks to 24h

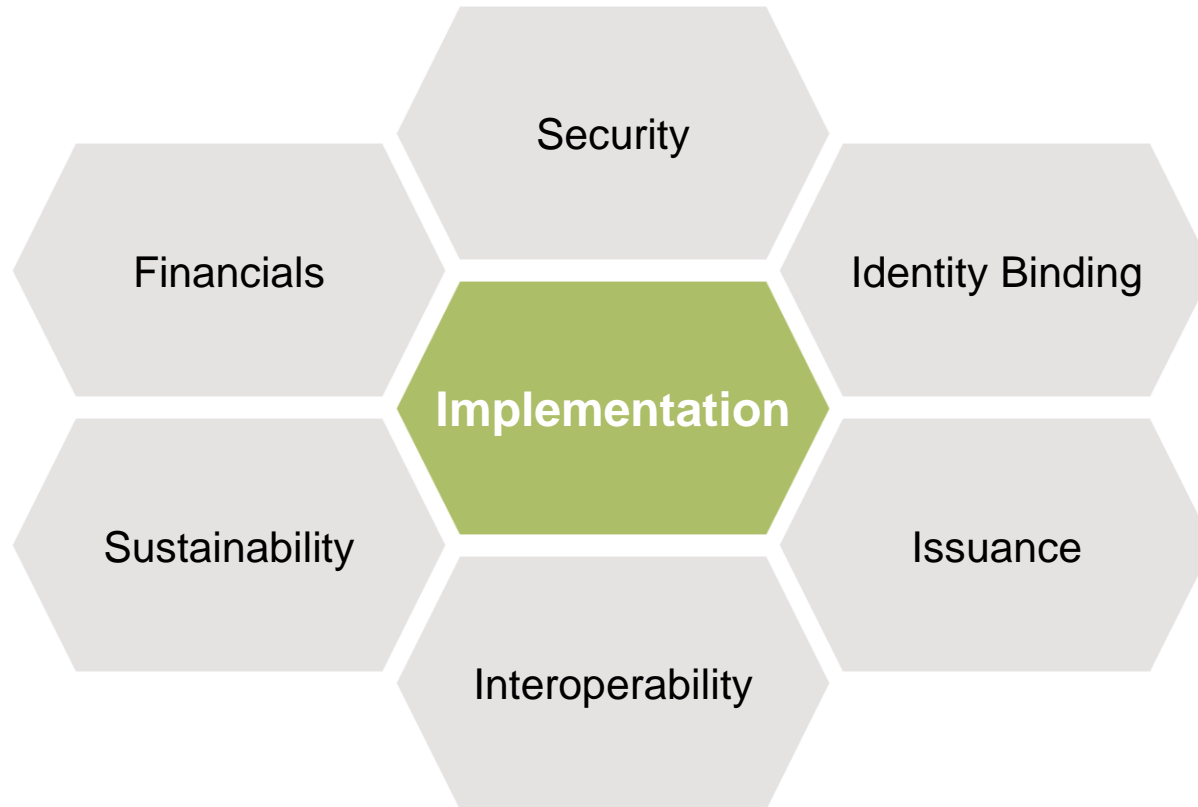


Cultural Events

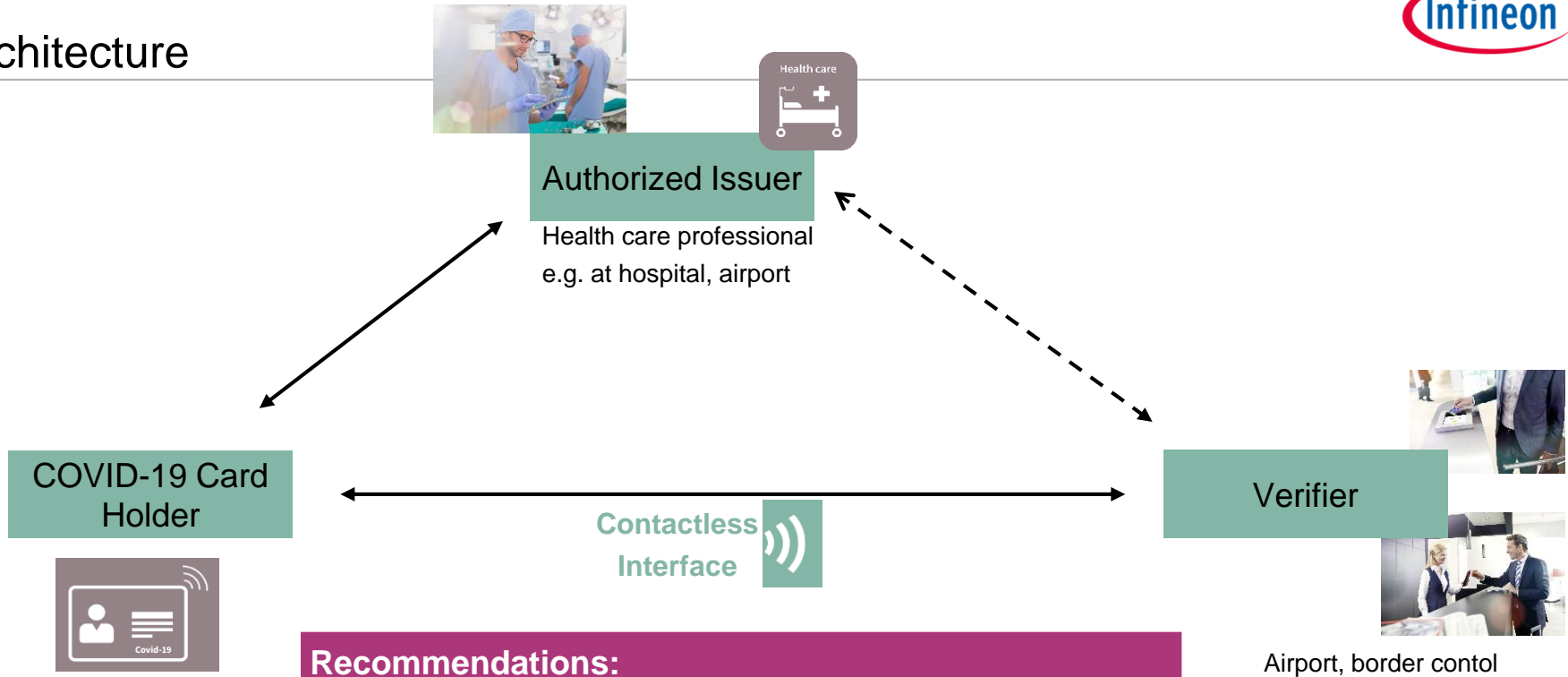
- > Music
- > Sports
- > Big events with many people



Implementation - Corner stones to be considered

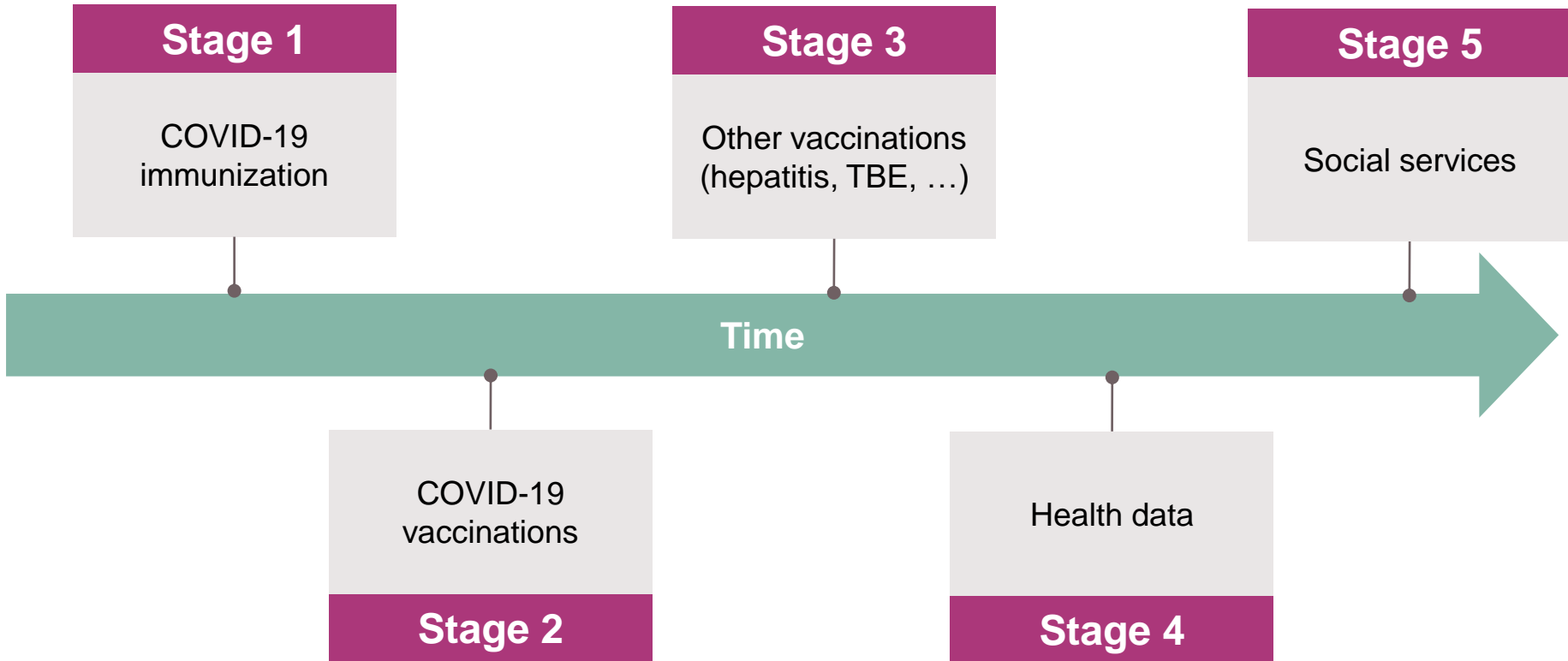


Architecture

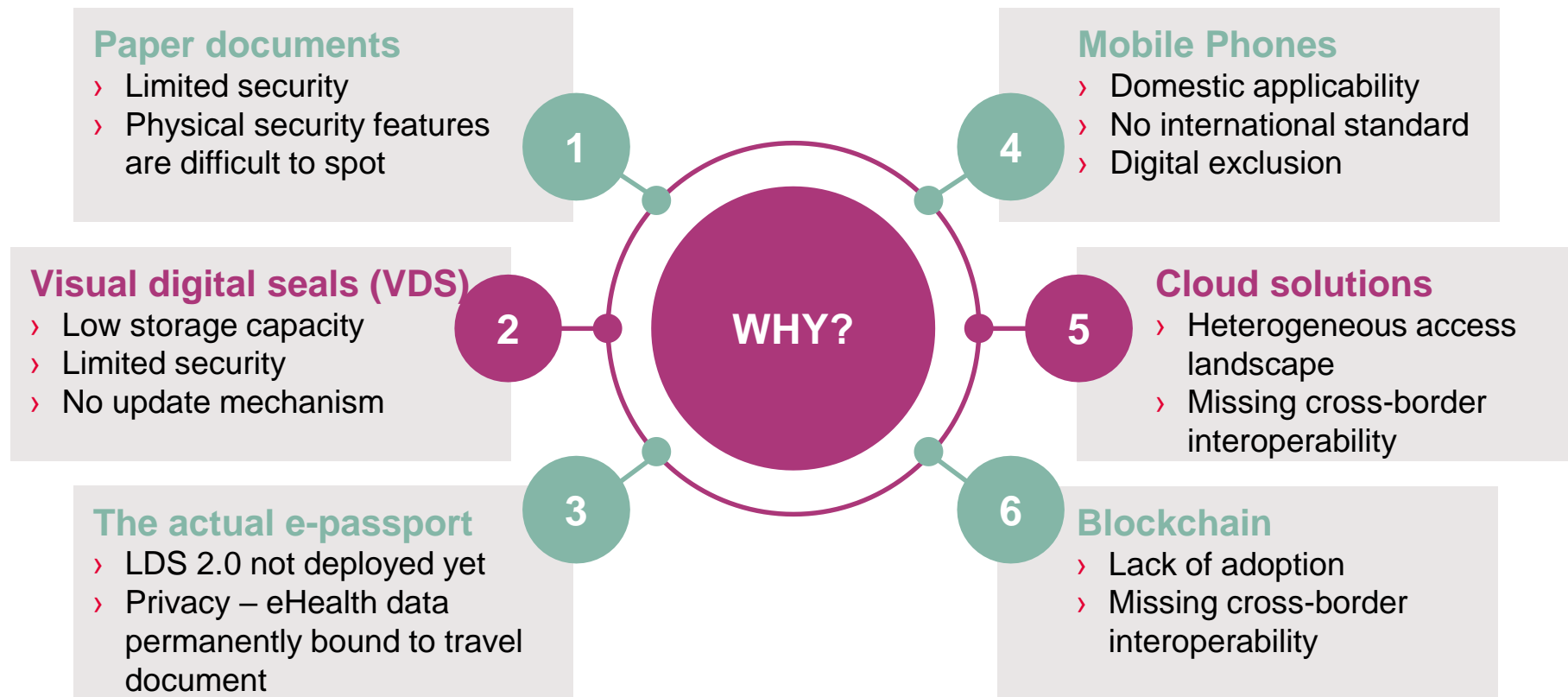


- Recommendations:**
- Ensure cross-border acceptance
 - Use technical standards, close to travel documents
 - Re-use of existing infrastructure

COVID-19 card as a first step for a solid eHealth solution



Why using a smart card instead of...?



Infineon's offerings

Hardware

- > SLE 77
- > SLE 78
- > SLC 52, SLC32
- > SLC 37, SLC38

Operating System

- > SECORA ID S
 - > 120kB free NVM
- > SECORA ID X
 - > 450kB free NVM

Applications

- > eMRTD Applet
 - > Infineon, Masktech or Cryptovision
- > ISO FileSystem Applet
 - > Infineon or Cryptovision
- > PKI Applet
 - > Masktech
- > CIPURSE

Support

Module

- > Contact-Based
- > Contactless
- > Dual Interface (e.g. Coil on Module)

Summary and Conclusions

COVID-19 card

- › Additional means for a verifier to better assess the risk wrt. infectiousness.

Form factor

- › Usability known to all stakeholders.
Highly secure due to tamper-resistant hardware.

International applicability

- › Easy and quick set-up possible due to existing cross-border acceptance and interoperability.



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