

# EFI

## *Fiscalization service*

neos

# AGENDA

- 01 FISCALIZATION PROCESS
- 02 FUNCTIONALITIES
- 03 TECHNICAL SOLUTION



# FISCALIZATION PROCESS



# FISCALIZATION PROCESS

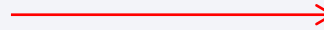
1. Fills in the element of the invoice



2. Data processing  
3. Creates an XML file  
4. Establishes on-line communication with the TA  
5. Submits to the TA data for verification of the invoice



Invoice verification request



Tax Administration



Invoice verification

8. Creates a QR Code  
9. Prints receipt with QR code



6. Data Control  
7. Verification of the invoice

# FUNCTIONALITIES

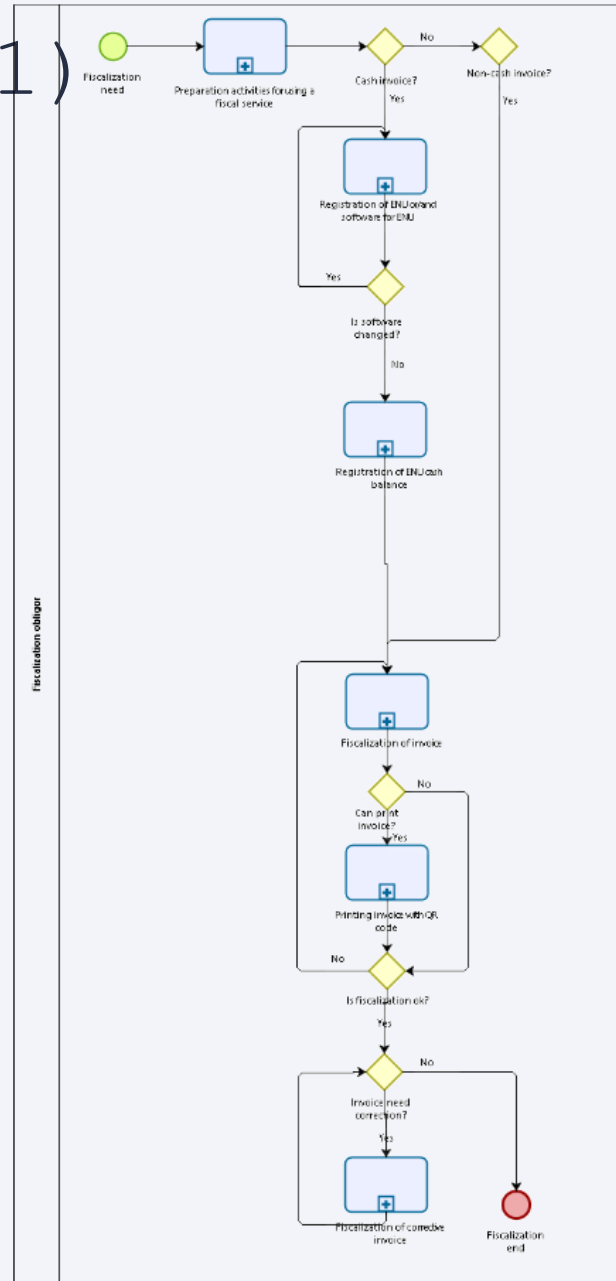


# FUNCTIONALITIES

- **Fiscalization service:**
  - Web service
- **Self-care portal (SEP):**
  - Online web application
- **Invoice check application:**
  - Online web application
  
- **Documents:**
  - Functional specification
  - Technical specification
  - Access instructions

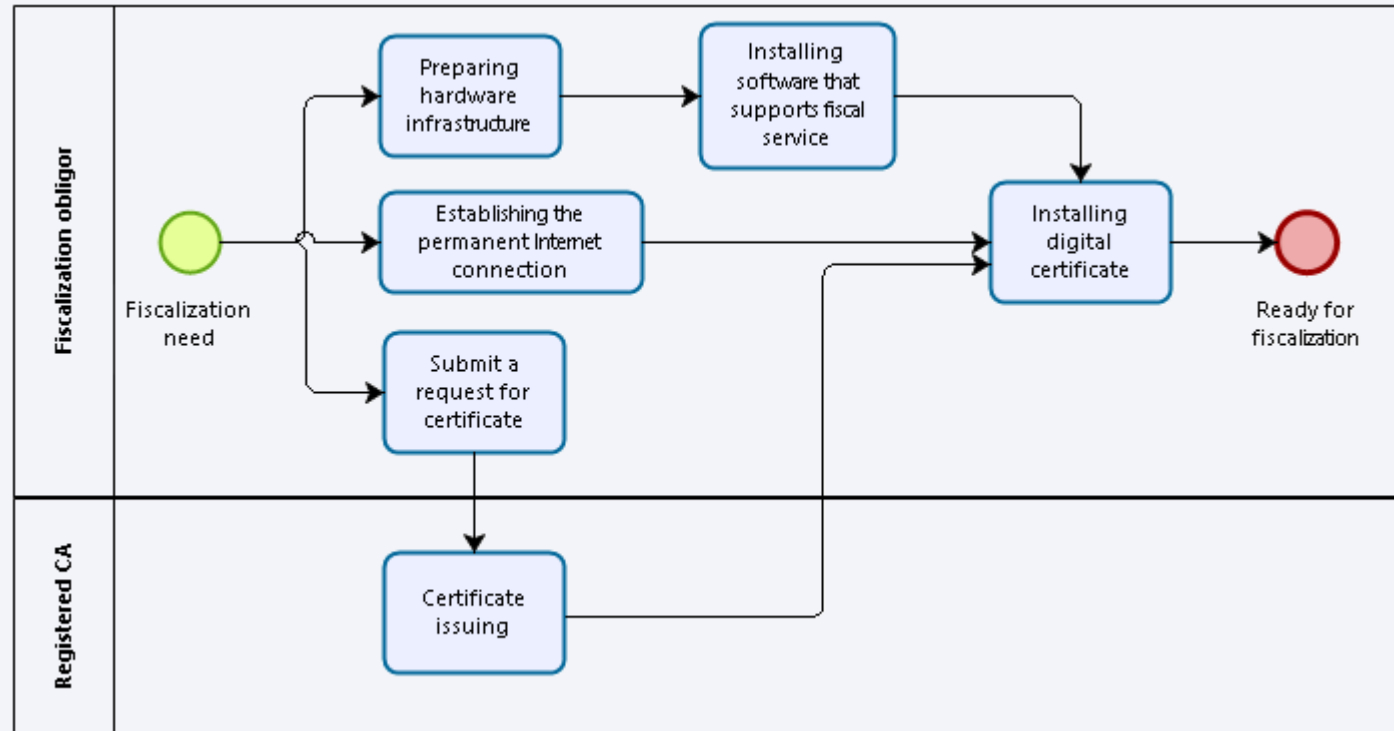
# FUNCTIONALITIES – FS (1)

1. Preparation activities for using fiscal service
2. Registration of ENU and software
3. Registration of ENU cash deposit
4. Fiscalization of invoice
5. Printing invoice with QR code
6. Fiscalization of corrective invoice



# FUNCTIONALITIES – FS (2)

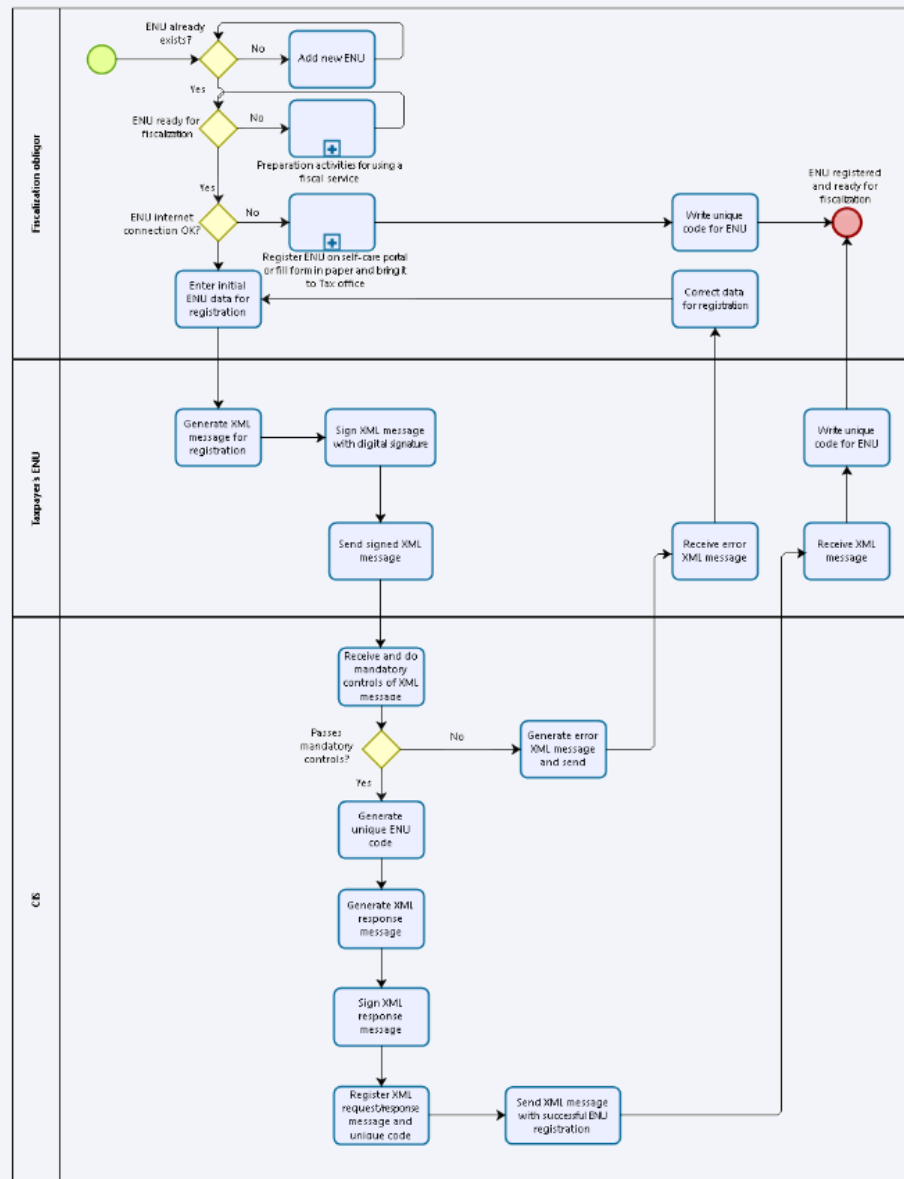
## 1. Preparation activities for using fiscal service





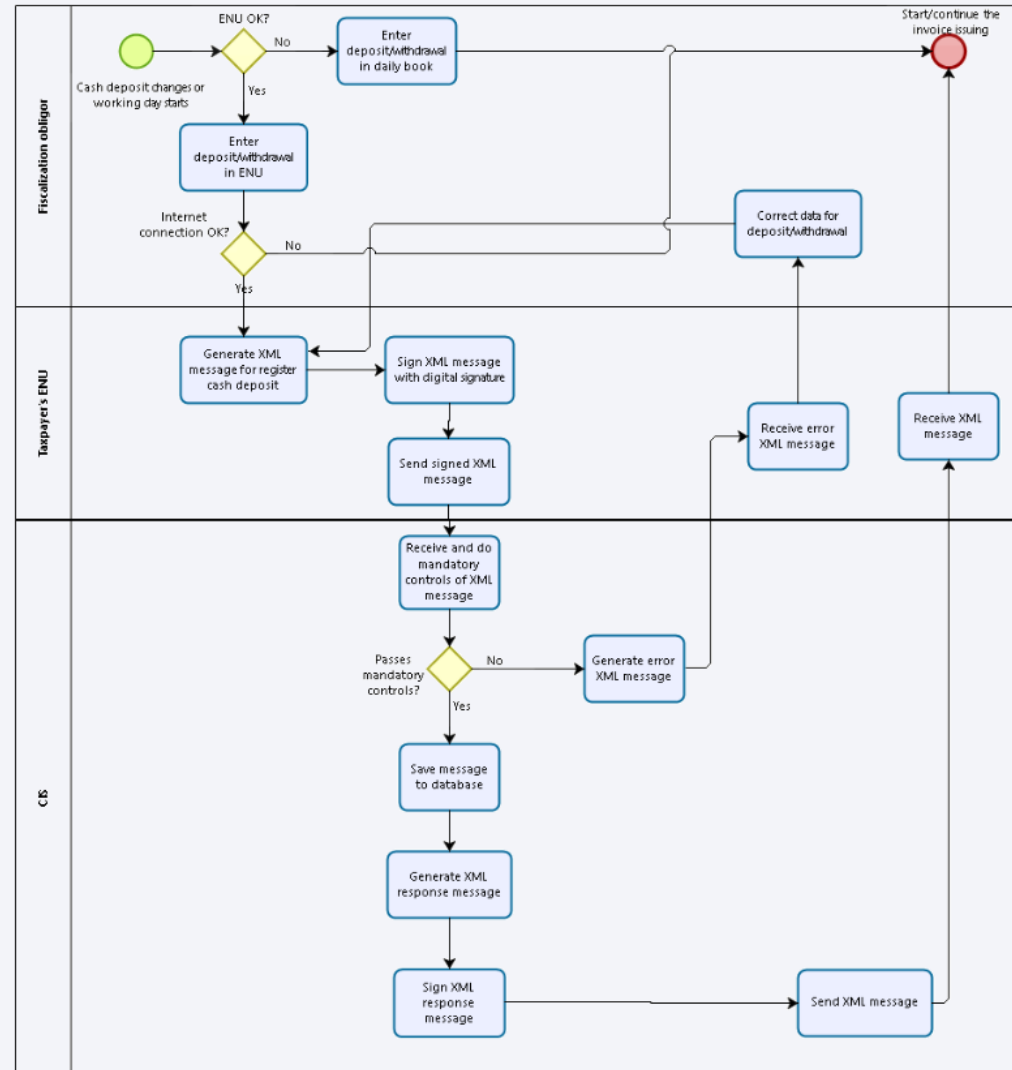
# FUNCTIONALITIES – FS (3)

## 2. Registration of ENU and software



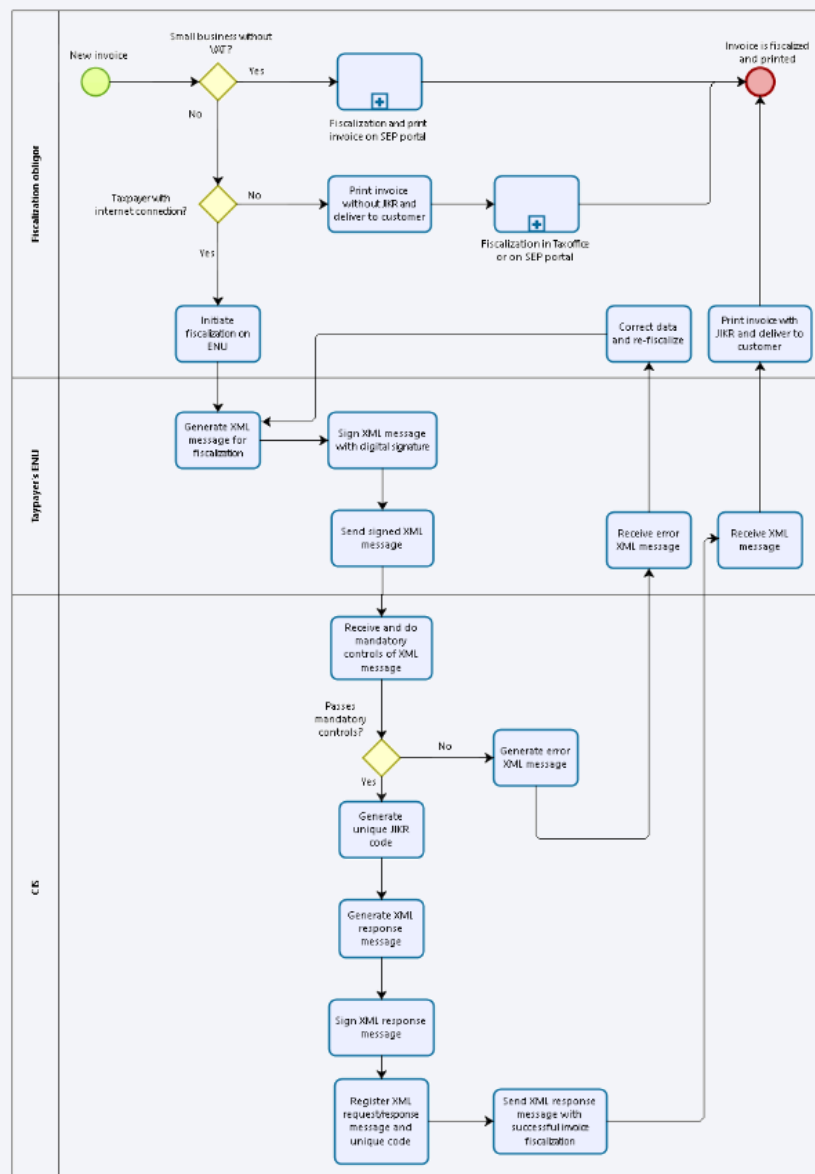
# FUNCTIONALITIES – FS (4)

## 3. Registration of ENU cash deposit



# FUNCTIONALITIES – FS (5)

## 4. Fiscalization of invoice



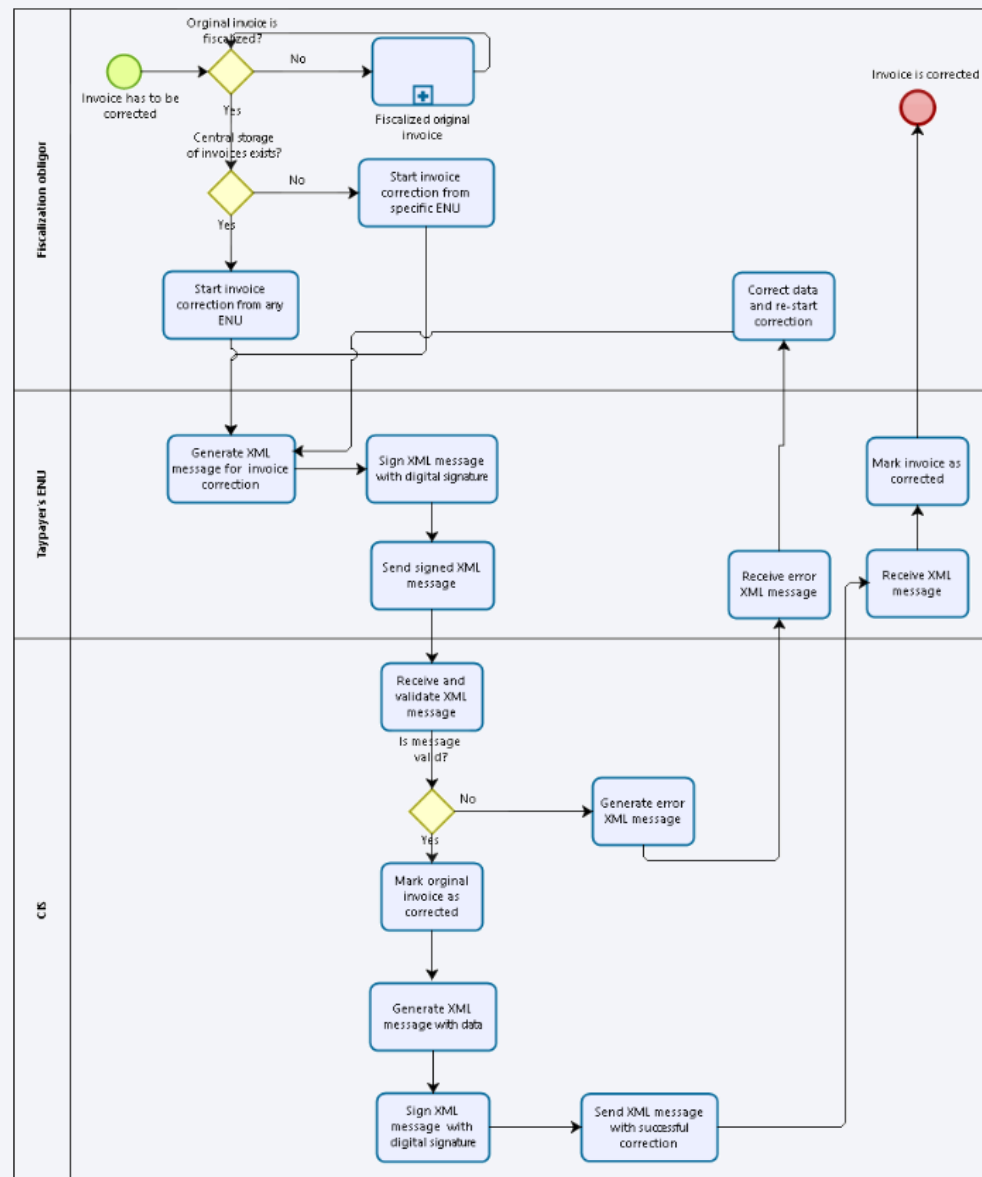
# FUNCTIONALITIES – FS (6)

## 5. Printing invoice with QR code

- QR code must be printed on all invoices, fiscalized or not
- Data stored in QR code:
  - PIB of the taxpayer
  - Date and time of issuing invoice
  - Number of the invoice
  - Code of business premise
  - Code of the ENU
  - Code of the software
  - Total invoice amount

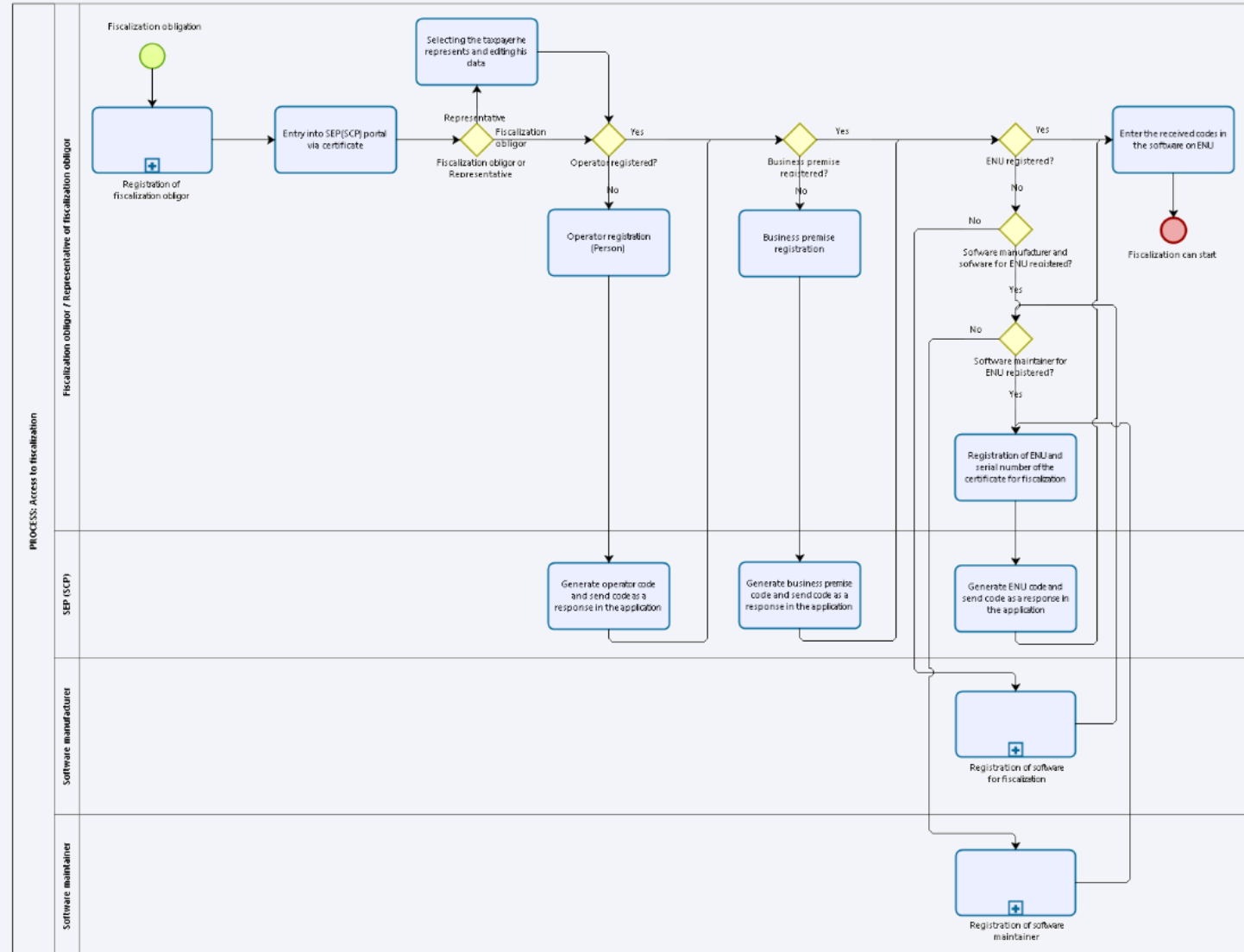
# FUNCTIONALITIES – FS (7)

## 6. Fiscalization of corrective invoice



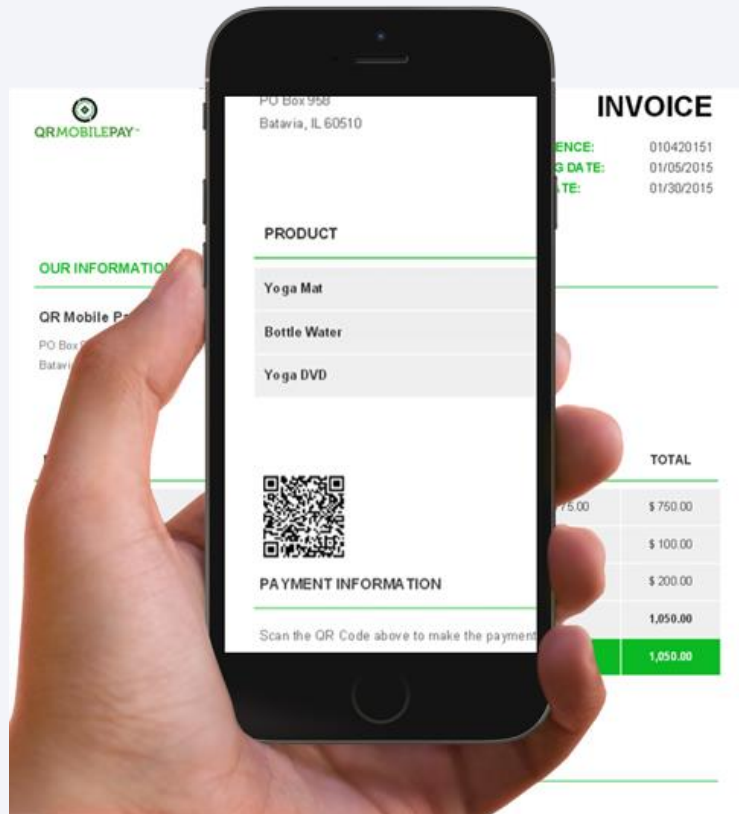
# FUNCTIONALITIES – SEP

- Registration of fiscalization obligor
- Registration of software
- Registration of software maintainer
- Registration of operator
- Registration of business premise
- Registration of ENU



# FUNCTIONALITIES – INVOICE CHECK

- Scanning QR code of the invoice
- Check invoice details
- Issue reporting



Invoice report ✕

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**Contact information**

NAME:

E-MAIL:

PHONE NUMBER:

I would like to stay anonymous

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**Invoice information**

NAME OF THE PARTY WHO ISSUED THE INVOICE:

ADDRESS OF THE PARTY WHO ISSUED THE INVOICE:


TAXPAYER IDENTIFICATION NUMBER OF THE PARTY WHO ISSUED THE INVOICE:

DATE WHEN THE INVOICE WAS ISSUED:  
mm/dd/yyyy

TYPE OF ISSUE:  
Invoice is not issued for the sold goods or services

ADDITIONAL NOTES ABOUT THE ISSUE WITH THE INVOICE:

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Nisam robot   
reCAPTCHA  
Pravila o privatnosti - Ujeti

# TECHNICAL SOLUTION



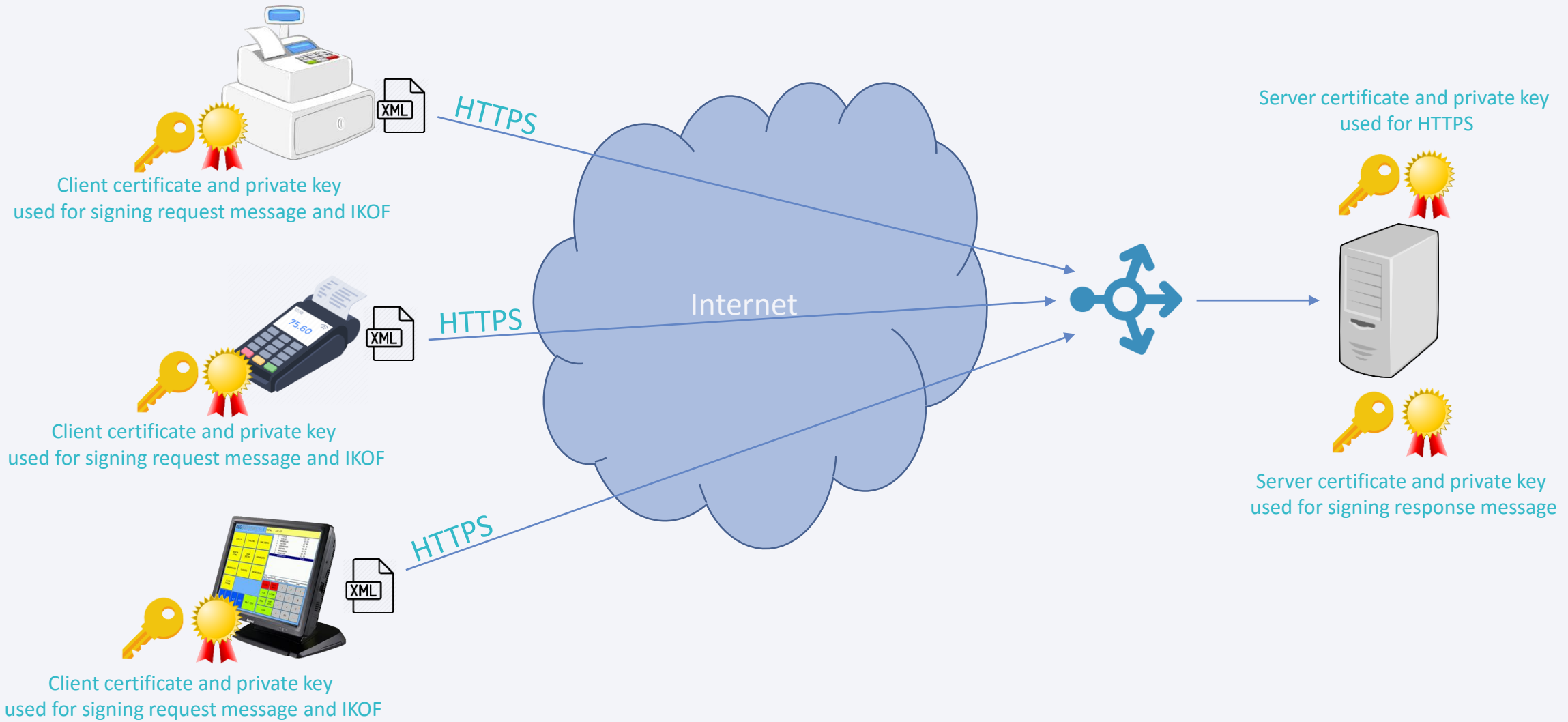


# TECHNICAL SOLUTION – FS (1)

- **Test environment:** <https://efitest.tax.gov.me/fs-v1/FiscalizationService.wsdl>
- **Production environment:** <https://efi.tax.gov.me/fs-v1/FiscalizationService.wsdl>

| Functionality                       | Service's method    |
|-------------------------------------|---------------------|
| Registration of ENU and software    | RegisterTCR         |
| Registration of ENU cash deposit    | RegisterCashDeposit |
| Fiscalization of invoice            | RegisterInvoice     |
| Fiscalization of corrective invoice | RegisterInvoice     |

# TECHNICAL SOLUTION – FS (2)



# TECHNICAL SOLUTION – FS (3)

## Outgoing message

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
```

```
    <RegisterInvoiceRequest xmlns="https://efi.tax.gov.me/fs/schema_" xmlns:ns2="http://www.w3.org/2000/09/xmldsig#" Id="Request"
      Version="1">
      <Header SendDateTime="2019-12-05T14:30:13+01:00" UUID="8d216f9a-55bb-445a-be32-30137f11b964" />
      <Invoice BusinUnitCode="ab123ab123" IssueDateTime="2019-12-05T14:30:13+01:00" IIC="4AD5A215BEAF85B0416235736A6DACAB"
        IICSignature="83D728C8E10BA04C430BE6..... F20AFBFA0602" InvNum="1/2019/cc123cc123" InvOrdNum="1" IsIssuerInvAT="true"
        IsReverseCharge="false" IsSimplifiedInv="false" OperatorCode="ab123ab123" SoftCode="EXAMPLE KODA SOFTVERA" TCRCODE="KOD BLAGAJNE"
        TotPrice="20.00" TotPriceWoVAT="16.00" TotVATAmt="4.00" TypeOfInv="CASH">
        <PayMethods>
          <PayMethod Amt="20.00" Type="BANKNOTE"/>
        </PayMethods>
        <Seller Address="ADRESA" Country="MNE" IDNum="ID BROJ" IDType="PIB" Name="IME PREZIME" Town="GRAD"/>
        <Items>
          <I C="501234567890" N="NAZIV PROIZVODA" PA="20.00" PB="16.00" Q="1.0" R="0" RR="true" U="piece" UPB="16.00" UPA="20.00"
            VA="4.00" VR="25.00"/>
        </Items>
        <SameTaxes>
          <SameTax NumOfItems="1" PriceBefVAT="16.00" VATAmt="4.00" VATRate="25.00"/>
        </SameTaxes>
      </Invoice>
      <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
        <SignedInfo>
          <CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
          <SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256" />
          <Reference URI="#Request">
            <Transforms>
              <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature" />
              <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
            </Transforms>
            <DigestMethod Algorithm="http://www.w3.org/2001/04/xmldsig#sha256" />
            <DigestValue>ECWby0FKaNQ6.....m8BPjyk6g=</DigestValue>
          </Reference>
        </SignedInfo>
        <SignatureValue>LHFUg3xNi.....tjpeYNw=</SignatureValue>
      </Signature>
    </RegisterInvoiceRequest>
```

```
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

SOAP outgoing message with request element in the body of the message

XML request with data located on a printed receipt. Data includes IKOF (IIC - Issuer Identification Code)

XML signature of the request data with certificate of the tax payer.

# TECHNICAL SOLUTION – FS (4)

## Incoming message

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
```

```
    <ns2:RegisterInvoiceResponse Id="Response" Version="1" xmlns:ns2=" https://efi.tax.gov.me/fs/schema "
    xmlns:ns3="http://www.w3.org/2000/09/xmldsig#">
      <ns2:Header RequestUUID="8d216f9a-55bb-445a-be32-30137f11b964" SendDateTime="2019-11-27T09:41:12+01:00" UUID="f8bcb5ae-59fb-41ac-9011-f4db86bbce26"/>
      <ns2:FIC>a592e7ec-9517-4f02-8d54-ac965f679a8c</ns2:FIC>
      <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
        <SignedInfo>
          <CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
          <SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256" />
          <Reference URI="#Response">
            <Transforms>
              <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature" />
              <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
            </Transforms>
            <DigestMethod Algorithm="http://www.w3.org/2001/04/xmldsig#sha256" />
            <DigestValue>WYXOkHAD.....SLOIbwDdHCQk=</DigestValue>
          </Reference>
        </SignedInfo>
        <SignatureValue>Bnr1bB8Ic.....bfAjdVUpA==</SignatureValue>
        <KeyInfo>
          <X509Data>
            <X509Certificate>MIIFRjCCB.....gpNT2r23YQ==</X509Certificate>
          </X509Data>
        </KeyInfo>
      </Signature>
    </ns2:RegisterInvoiceResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

SOAP incoming message with response element in the body of the message

XML response with data located on a printed receipt. Data includes JIKR (FIC - Fiscalization Identification Code)

IKOF from a outgoing message and JIKR from incoming message must be printed on the receipt.

XML signature of the response data with certificate of the fiscalization service.

# TECHNICAL SOLUTION – FS (5)

## Real time checks:

- Message size
- XML schema
- Certificate
- Signature
- Client time
- Amounts
- Business checks
- ...

## SoapFault:

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <SOAP-ENV:Fault>
      <faultcode>SOAP-ENV:CLIENT</faultcode>
      <faultstring xml:lang="en">OPIS GREŠKE.</faultstring>
      <detail>
        <code>KOD GREŠKE</code>
        <requestUUID>78dde160-2b33-40e4-98fa-f6a2c34475a3</requestUUID>
        <responseUUID>9416dcca-499a-4724-933d-40d115ea4fc7</responseUUID>
      </detail>
    </SOAP-ENV:Fault>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

# TECHNICAL SOLUTION – INVOICE CHECK

- QR code with URL:

<https://efitest.tax.gov.me/ic/#/verify?iic=EA26D5BE7F45827026108F825A8A512B&tin=91806031&crtid=2019-09-26T13:50:13+01:00&ord=6&bu=bg517kw842&cr=xb131ap287&sw=gz434bv927&prc=199.00>

- URL query parameters:

- IKOF (IIC)
- Taxpayer ID
- Issue date time
- Invoice number
- Business unit code
- ENU code
- Software code
- Price





# Q & A