

**Focus on your Core Business –
with the Open-Source
Middleware for POS Systems**

fiskaltrust.



We know how to deal with local regulations, payments, value-added-taxes, and receipts.



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Challenges when implementing POS software



Practical example: Challenges in



&



What the focus should be

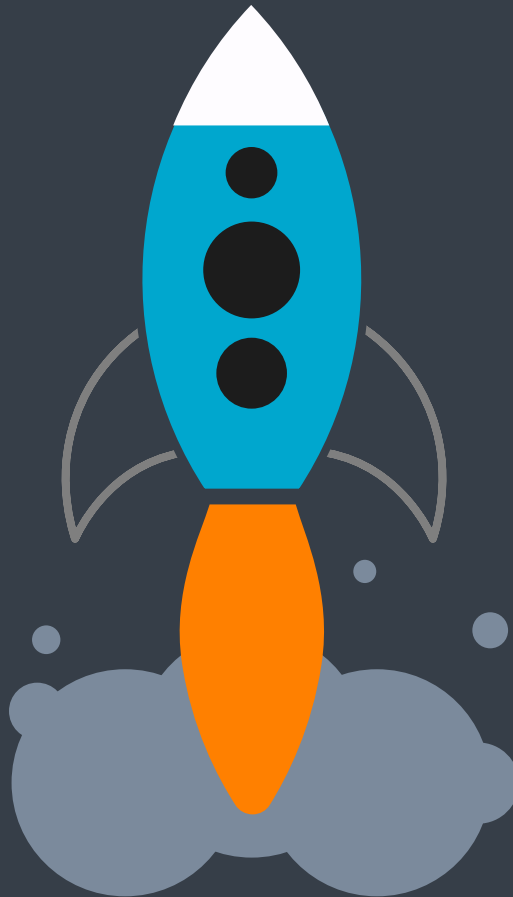
Build products and features for your industry, your key partners, and your markets



Deliver the experience your users love



Add value with digital receipts, payment and more

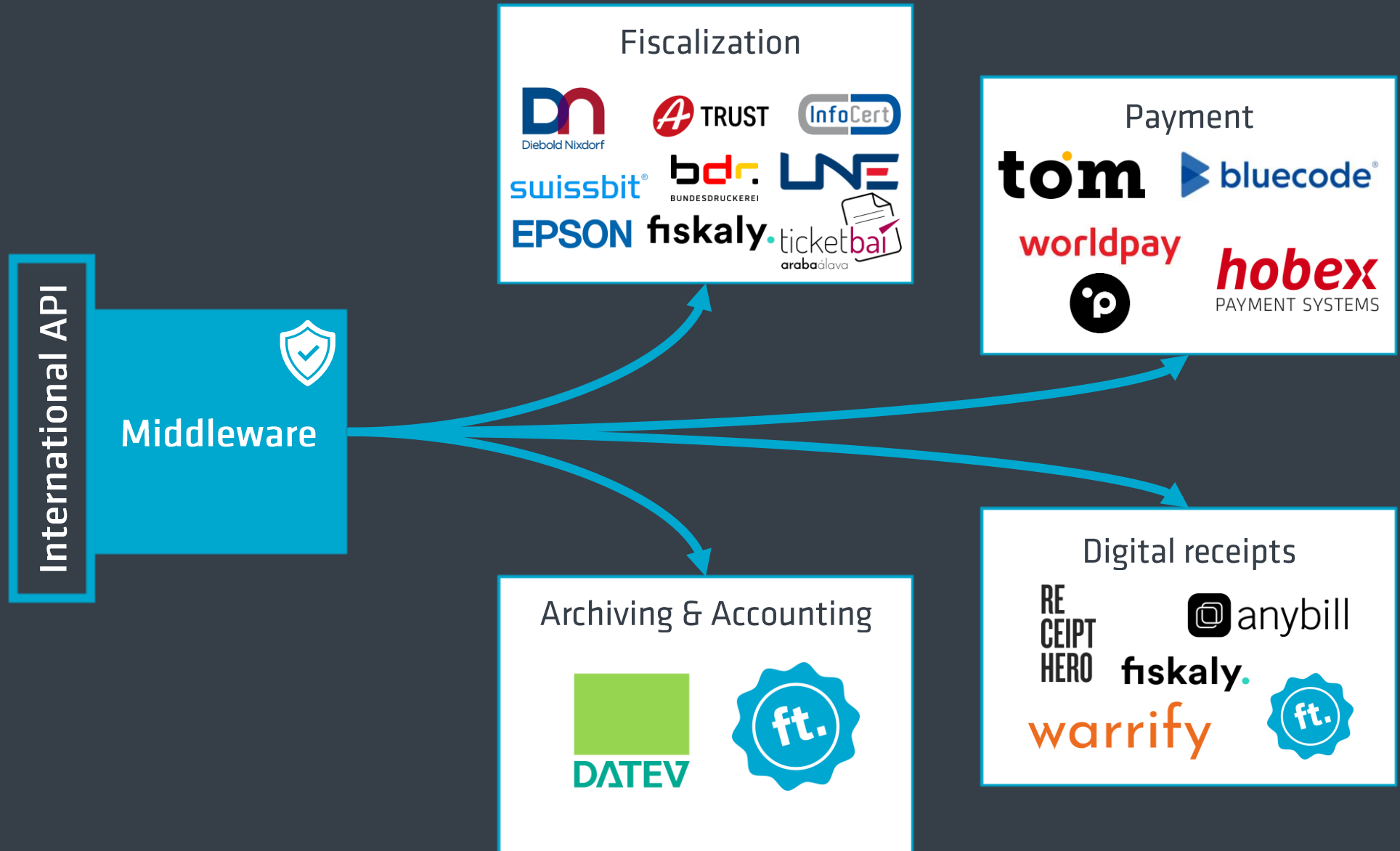


Build flexible solutions your vendors can compose individually



Create products that stand out from the competition

The fiskaltrust.Middleware



The international POS API



International API

1. Execute payments with `/pay`
2. Fiscalize receipts with `/sign`
3. Create digital receipts with `/print`
4. Export data with `/journal`

Practical example: Fiscalization in &

```
{
  "ftCashBoxID": "b5d66602-78bc-49c5-b0a2-44325c34af12",
  "ftPosSystemId": "2d4dbe35-92a3-4c0e-9124-d2804772fe35",
  "cbTerminalID": "Terminal2",
  "cbReceiptReference": "receipt-2412",
  "cbReceiptMoment": "2023-02-16T17:02:10Z",
  "cbChargeItems": [
    {
      "Quantity": 2.0,
      "Description": "Coffee to Go",
      "Amount": 3.50,
      "VATRate": 19.00,
      "ftChargeItemCase": 0x444500000000011,
      "Moment": "2023-02-16T17:02:00Z"
    }
  ],
  "cbPayItems": [
    {
      "Quantity": 1.0,
      "Description": "Cash",
      "Amount": 7.00,
      "ftPayItemCase": 0x4445000000000001,
      "Moment": "2023-02-16T17:02:10Z"
    }
  ],
  "ftReceiptCase": 0x4445000100000001
}
```

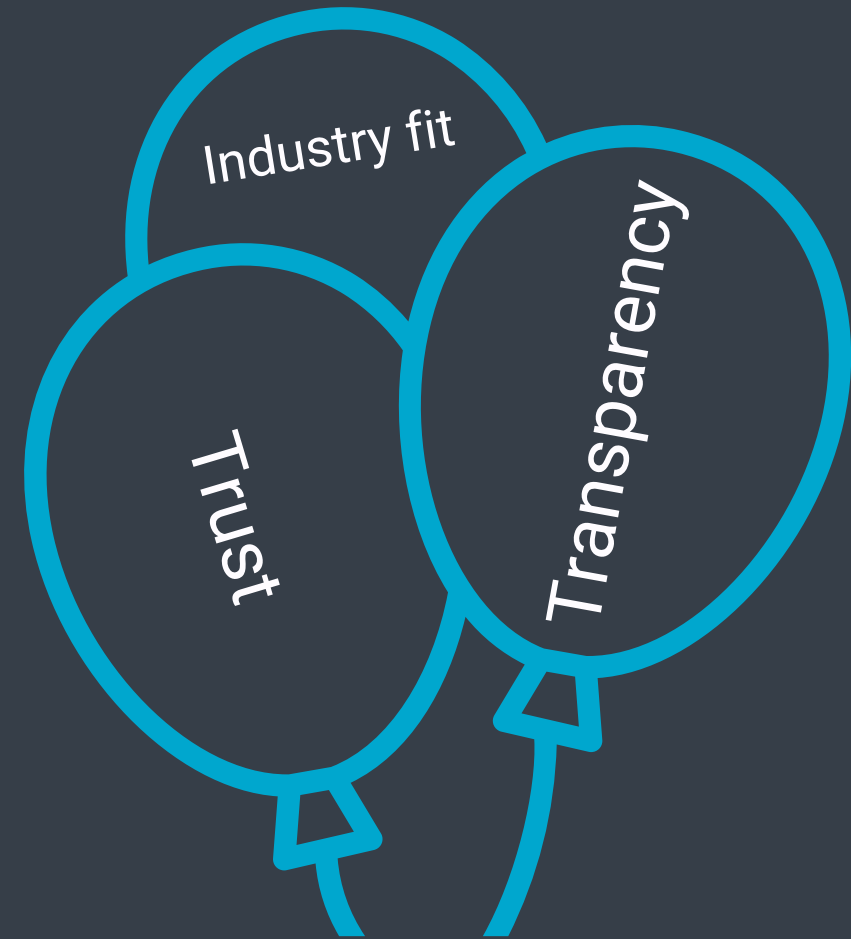
```
{
  "ftCashBoxID": "b5d66602-78bc-49c5-b0a2-44325c34af12",
  "ftPosSystemId": "2d4dbe35-92a3-4c0e-9124-d2804772fe35",
  "cbTerminalID": "Terminal2",
  "cbReceiptReference": "receipt-2412",
  "cbReceiptMoment": "2023-02-16T17:02:10Z",
  "cbChargeItems": [
    {
      "Quantity": 2.0,
      "Description": "Coffee to Go",
      "Amount": 3.50,
      "VATRate": 20.00,
      "ftChargeItemCase": 0x465200000000003,
      "Moment": "2023-02-16T17:02:00Z"
    }
  ],
  "cbPayItems": [
    {
      "Quantity": 1.0,
      "Description": "Cash",
      "Amount": 7.00,
      "ftPayItemCase": 0x4652000000000001,
      "Moment": "2023-02-16T17:02:10Z"
    }
  ],
  "ftReceiptCase": 0x4652000000000001
}
```


fiskaltrust.



Open Source

Why Open Source?



```
Task<ReceiptResponse> InternalSign(ftQueue queue, ReceiptRequest data)
```

```
_logger.LogTrace("SignProcessor.InternalSign called.");  
if ((data.ftReceiptCase & 0x0000800000000000L) > 0)  
{  
    try  
    {  
        var foundQueueItem = await GetExistingQueueItemOrNullAsync(data).ConfigureAwait(false);  
        if (foundQueueItem != null)  
        {  
            var message = $"Queue {_queueId} found cbReceiptReference \"{foundQueueItem.cbReceiptReference}\";  
            _logger.LogWarning(message);  
            await CreateActionJournalAsync(message, "", foundQueueItem.ftQueueItemId).ConfigureAwait(false);  
            return JsonConvert.DeserializeObject<ReceiptResponse>(foundQueueItem.response);  
        }  
    }  
    catch (Exception x)  
    {  
        var message = $"Queue {_queueId} problem on receiptrequest";  
        _logger.LogError(x, message);  
        await CreateActionJournalAsync(message, "", null).ConfigureAwait(false);  
    }  
}  
  
if (_receiptRequestMode == 1)  
{  
    //try to sign, remove receiptrequest-flag  
    data.ftReceiptCase -= 0x0000800000000000L;  
}  
else  
{  
    return null;  
}  
}  
  
var queueItem = new ftQueueItem  
{  
    ftQueueItemId = Guid.NewGuid(),  
    ftQueueId = queue.ftQueueId,  
    ftQueueMoment = DateTime.UtcNow,  
    ftQueueTimeout = queue.Timeout,  
    cbReceiptMoment = data.cbReceiptMoment,  
    cbTerminalID = data.cbTerminalID,  
    cbReceiptReference = data.cbReceiptReference,  
    ftQueueRow = ++queue.ftQueuedRow  
};  
if (queueItem.ftQueueTimeout == 0)  
{  
    queueItem.ftQueueTimeout = 15000;  
}
```

```
queueItem.country = ReceiptRequestHelper.GetCountry(data);  
queueItem.version = ReceiptRequestHelper.GetRequestVersion(data);  
queueItem.request = JsonConvert.SerializeObject(data);  
queueItem.requestHash = _cryptoHelper.GenerateBase64Hash(queueItem.request);  
_logger.LogTrace("SignProcessor.InternalSign: Adding QueueItem to database.");  
await _queueItemRepository.InsertOrUpdateAsync(queueItem).ConfigureAwait(false);  
_logger.LogTrace("SignProcessor.InternalSign: Updating Queue in database.");  
await _queueRepository.InsertOrUpdateQueueAsync(queue).ConfigureAwait(false);
```

github.com/fiskaltrust

What's next?

Integrate the
Middleware into your
POS software



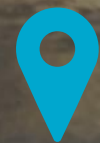
Let your service be a
part of the Middleware

Join the growing
developer community

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