Yonoton Technical Service Description

powered by
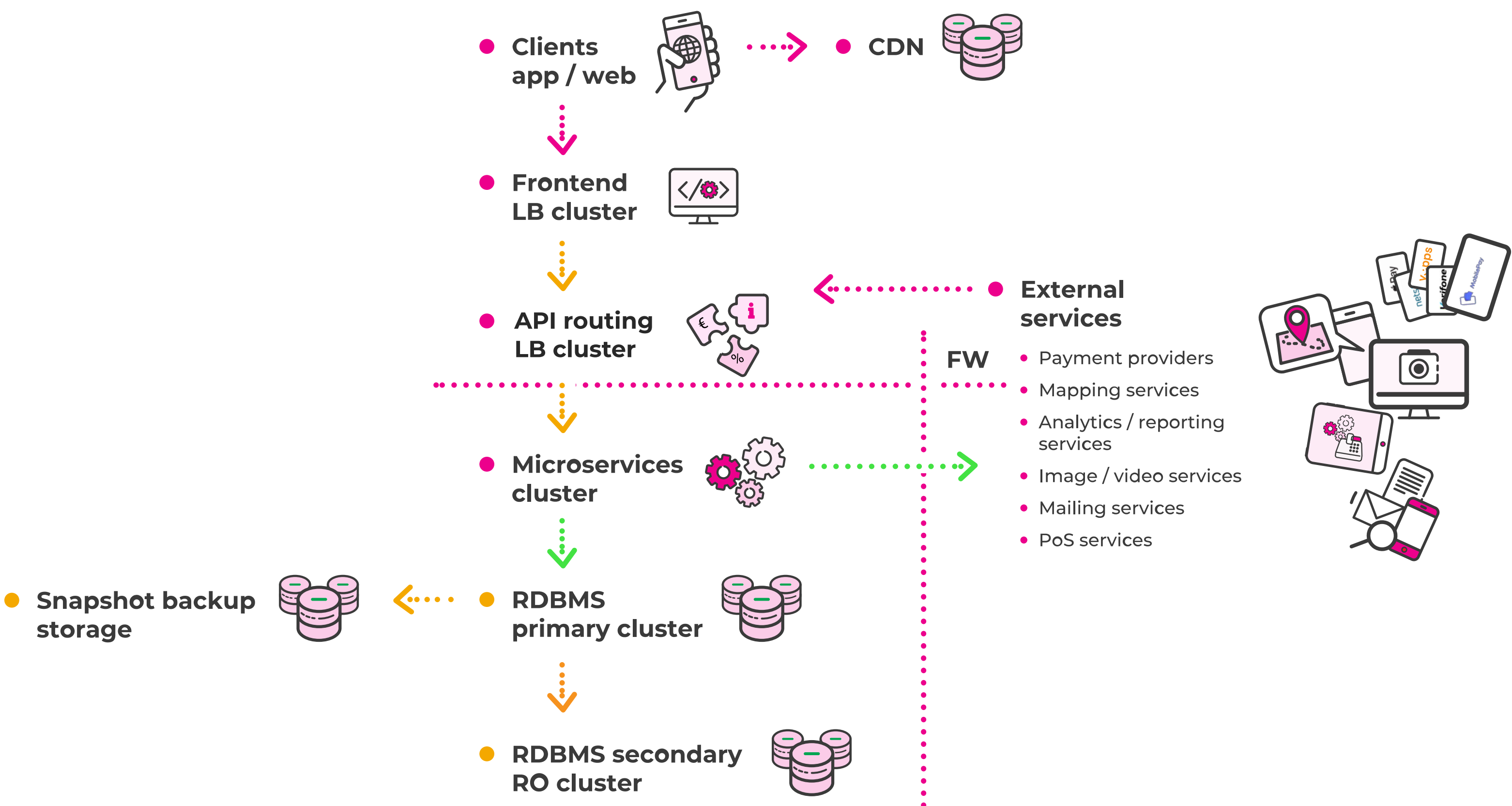**yonoton**

Technical Service Description

The Powered by Yonoton -framework is a complete set of tools and services for operating a revenue driven application.

All parts of the framework are built to work with each other providing a seamless service experience.

All parts of the framework are continuously maintained and further developed to provide a future proof solution.

Yonoton Backend Services

Yonoton backend services provide the backbone for all Powered by Yonoton -applications

- Clients app / web
- CDN
- Frontend LB cluster
- API routing LB cluster
- Microservices cluster
- Snapshot backup storage
- RDBMS primary cluster
- RDBMS secondary RO cluster

FW

External services
- Payment providers
- Mapping services
- Analytics / reporting services
- Image / video services
- Mailing services
- PoS services

APIs

Comprehensive set of Application Programming Interfaces (APIs) are available to interact between client side interfaces and backend services. The APIs are utilized by Yonoton and the fully documented APIs can be securely utilized by 3rd party systems as well.

Payment systems

Payments within Powered by Yonoton -applications are handled via payment providers (gateways) to be in compliance with PCI and other industry standards and regulations. Yonoton provides ready-made integrations to all major payment methods and gateways such as:

- Nets / Netaxept (credit cards)
- Verifone (credit cards)
- Adyen (credit cards, Apple Pay, Google Pay)
- Stripe (credit cards, Apple Pay, Google Pay)
- Vipps (Norway only)
- Siirto (Finland only)
- Mobilepay
- Pivo (Finland only)
- Afterpay

Integrations

Yonoton provides various options to interact and integrate with external systems.

Ready-made and supported integration frameworks are available for:

- Product information
- Ticketing information
- Site information
- Event schedule information
- External user authentication
- Reservations
- Student status information
- Feedback information

Integrations typically include systems such as:

- point-of-sale (POS)
- ticketing
- resource management and reservation
- user management
- e-mail and marketing
- analytics and reporting
- accounting

Integrated services are often tailored to customer needs. Ready-made integrations exist for systems such as:

- Algolia
- Bokun
- Cenium
- Cloudinary
- Google Calendar
- Google BigQuery
- Liana (Postiviidakko)
- Proximiio
- Restolution
- Reztic
- Taplause
- Zoined

Data model

Yonoton data model is built with a business driven mindset to have the most appropriate data in place. In the center of the data model, Yonoton has the data related to purchases and payments. This core is supported by various models critical for a successful operation in a fully mobile service.

The data model readily supports:

Channels

- Configurable channels to support omni-channel operations
- Configurable on application and merchant level
- Channels set of app features for each site

Sites

- Merchant specific sites (shops, restaurants, etc.)
- Point of interest -type of sites (attractions, facilities, etc.)
- Configurable set of app features for each site
- Weekly opening hours with support for exceptions
- Site types and tagging
- Site grouping (e.g. a chain with multiple sites)
- Contact details management to support separate contact details for different purposes
- Location by address or specific coordinates for mapping and routing
- Images supporting site's main image, logo image, gallery images with descriptions

Merchants

- Support for multi-merchant setup
- Fully customizable set of payment options per merchant
- Customizable integration options per merchant
- Customizable reporting/accounting options per merchant
- Configurable currency per merchant

Outlets (point of sale, POS)

- Configurable set of features per outlet:
- reporting options
- payment capturing options
- order flow options
- delivery options
- preparing and delivery times

Product catalogue

- Enables sharing of product data between merchants
- Sharing of product data is configurable on data field level

Product classification

- Classification provides basic product parameters such as VAT, type and external reference codes

Products

- Support for multilingual content such as names and descriptions
- Availability times
- Weekly availability hours (e.g. lunch products)
- Weekly pricing schedule (e.g. happy hour products)
- Delivery options
- Add-on products (available only with main product)
- Product options:
- Support for multi-level options
- Support for priced product options
- Categories, tags and sorting options
- Support for diets, allergens and alcohol percent
- Combination products (e.g. a meal with burger and fries)
- Recommended products (e.g. fries recommended with burger)
- Default price and support for price category

Price categories

- Price categories with ability to limit to selected merchants
- Price category with a possibility to set price for product and category using:
- Fixed price (e.g. 5€)
- Price discount relative to product's main price (e.g. -5€)
- Price discount percent relative to product's main price (e.g. -50%)

Data model

Calendar and events

- Timed events with customizable set of features

Images

- Image gallery with tags
- Images can be used to all content
- Highly optimized and high speed delivery via content delivery network

Purchases and payments

- Support for multiple stored payment methods (e.g. credit cards)
- Support for multi-currency, currency set on merchant level
- Item level reporting with support for all item level discounts and delivery/service fees
- Support for refunding and refund reporting

Geolocation and geofencing*

- Location and geofence based triggering of actions
- Address and coordinate based positioning for sites, outlets and users
- Distance calculations
- Routing and wayfinding on maps

Multilingual

- Support for multiple user interface languages
- Fully localized and customizable texts for static texts
- Readily available for apps English, Finnish, Swedish, Norwegian and Estonian
- Support for multilingual content on products

Users

- Profile data
- Favorite sites and events
- Geolocation and geofencing status
- Purchase history
- Member level
- Administration access and roles
- Coupons, tickets and stampcards

Coupons and benefits

- Availability times
- Configurable options for consuming in app and outside app purchases
- Support for various types of benefits such as:
- Single use coupons
- Multi use coupons
- Season and membership coupons
- Lunch compensation benefits
- Support for limiting coupon usage by specific merchant, product, site and member levels
- Support for coupons in coupons to group benefits (e.g. VIP card enables various benefits in different sites)

Activation codes

- Availability times
- Support for coupon, discount and membership activation codes
- Support for predefined and generated codes
- Configurable options for once per user and for first purchase only

Shopping cart

- Delivery options such as pickup, seat/room, home delivery and virtual
- Pickup type options such as eat-in and takeaway
- Payment method options
- Delivery time options
- Item counts and options
- Support for discounts, student and employee compensations and benefits

*Not part of the basic service package

Data model

News

- Publishing times
- Support for limiting visibility by favorite sites and member levels

Feedbacks

- Textual and numeric feedback
- Support for linking feedback to a purchase or site
- Support for having separate contacting details related to feedback
- Support for categorizing feedbacks

Campaigns

- Publishing times
- Supports campaigns using push notifications and without
- Single run, repeating and triggered campaigns
- Support for running a campaign automatically based on triggers such as:
- Event start
- Event end
- Purchase
- Feedback
- Membership
- Configurable campaign message expiration by specific time or relative to sending time
- Separate content for push notification and in app message
- Support for call-to-actions on campaign messages such as giving feedback and linking to content
- Support for limiting visibility by various parameters such as:
- favorite sites
- having specific coupons
- member levels
- Support for limiting timespan between messages for user

Data security

Any data operated by Yonoton is managed and operated in highly reliable data warehouses within the EU. All data is fully replicated within multiple regions to provide protection against a failure in a single datacenter. All data is backed up daily and full daily backups are stored in minimum for a period of seven days.

General Data Protection Regulation (GDPR)

Special terms and conditions under General Data Protection Regulation (GDPR) shall apply when Yonoton (Supplier) processes personal data on behalf of the Client under the agreement of the parties have concluded. In this case, the Client acts as the controller and the Supplier acts as a processor of personal data. Parties shall make a Data processing agreement.

As part of end user applications, users may provide personal data regulated by GDPR for legitimate purposes. This typically includes information such as name, email address, phone number, address, postal code and city. If any personal data is collected, a clear consent for Terms of Use and Privacy Policy from a user is required. Collecting personal data is a decision made by the Client (controller).

Yonoton provides means to clear out personal data when so requested by the user. Clearing personal data complies with the "Right to be forgotten" without disrupting historical data required for other purposes such as accounting, reporting and analytics.

By default, data exported to external systems is anonymized unless otherwise decided.

Yonoton does not collect or store any highly confidential information such as credit card details or personal identification numbers. Such information may be stored and processed by industry standard compliant payment providers when applicable.

Yonoton Library v3

The latest v3 Yonoton library provides a well designed and battle tested basis for the features on iOS and Android applications. These highly customizable features are the building blocks for any Powered by Yonoton -application.

The library is continuously developed and maintained to keep up with the latest developments and requirements on mobile devices and operating systems.

On top of the direct Yonoton features, the library includes features such as:

- Highly detailed usage analytics
- Crash and error analytics
- User authentication by email, phone, Facebook, Google
- Several map options
- Geofencing using beacons or location

Yonoton Admin Console

A web based Yonoton Admin Console allows administrators to operate and manage all Yonoton data and features with ease.

YonOps

Yonoton Operations (YonOps) is an Android application meant to replace all other tablets behind the counter as well as self-service kiosks. The whole application can be themed with desired colour combinations and translated to the customers' language. The application can also be configured to run in Kiosk mode (not to be confused with the kiosk part of YonOps). This means that all the Android navigation bars are hidden and that the user can never close the application.

YonOps consists of several sections that will be outlined next.

YonOps: Point of Sale

The Yonoton Point of Sale system is fully integrated with the Yonoton platform and offers all the capabilities one hopes to find in a modern system such as:

Different payment methods out of the box

The system currently supports payments with integrated terminals, external terminals, NFC chips, Vipps QR codes and cash. The current version already has integrations to several payment providers and if Your desired provider isn't supported yet, the architecture is designed in such a way that allows us to add them quickly.

Device Integrations

The application already supports a number of devices including printers, cash registers, nfc readers and barcode scanners.

Employee profiles

Users can be assigned with different roles and can e.g. save their favourite products on the device so they can be found easily. Users for a given outlet can be managed from the Yonoton Admin console.

Offline purchases

Some payment methods support offline payments in case of poor internet connection and Yonoton PoS is capable of that as well. At least all purchases made with cash or payment terminals are first saved in an offline-capable storage and from there synced to our server.

Product Configuration

The product configurations such as extra items, sizes and opening hours can easily be managed from the Yonoton Admin console, same as our mobile apps.

Discounting

Yonoton PoS supports multiple different discount categories such as list price discounts, loyalty discounts, coupons etc. In addition the cashier may enter a manual discount on the spot.

Order History and Refunds

Once in our backend, all orders from that outlet can be reviewed from the purchase history section. There you can also reprint receipts and make refunds.

Different Tablet Devices

The architecture has screen scaling and theming built in from the start. Whilst we currently support two different tablet devices, the app can be adapted to other devices with e.g. different screens.

Integrations to Tax Authorities' Systems

All purchase and other data is integrated into the relevant tax authority's systems depending on country/region. Currently we support Finland and Norway and have more countries in the pipeline.

Second Screen

Many tablets support a second, customer-facing screen. YonOps can display different data here such as an order summary, QR-codes for payment etc.

YonOps: Kiosk

YonOps Kiosk is essentially a stylised version of the Point of Sale system. It uses the same shopping cart system, supports a subset of the same, fully configurable payment methods and integrates to the same external devices (printers, readers etc). The User Interface however can be configured to have the desired look and feel, for example similar to the client's mobile application.

The functionalities include the following:

- Displaying commercials when the tablet is idle
- Product options
- Recommended products to include in the order (configurable in the Yonoton Admin console)
- Scanning discount coupons
- Various payment methods including integrated terminals, mobile payments via QR code (for example Vipps), and NFC payments
- Receipt printing via integrated or USB printers
- Sending orders to Yonoton order management

YonOps: Yorma

Yorma is a part of the YonOps application used for managing day-to-day operations behind the desk at the point of sale such as:

- order management
  - The orders made by any media (Web, app, kiosk, PoS) can be managed in the Yorma. Once the order arrives to Yorma, its stages can be changed according to the process. Such as: Future → In process → Preparing → Ready → completed orders. Once the stage of the order changes, it can trigger various actions such as push notification to the customer, printed ticket to the kitchen an so on.
- outlet specific product limitations (e.g. out of stock)
- entrance and other ticket checking
- member level checking
- stampcard management
- RFID wristband payments
- daily summary reporting

YonOps hardware

YonOps is available to install by request from Yonoton. Yonoton can also use MDM (mobile device management) software to install the software remotely and can also set the software to kiosk mode, where users can only do the actions desired on the device. It can be used on any major Android devices running Android 8.0 or newer.

Additionally Yonoton offers a set of hardware especially designed to support features such as:

- QR and barcode readers
- RFID wristband readers
- printers and other peripherals
- ethernet
- power over ethernet (PoE)
- mounting with VESA standard

Yonoton Checkout

Yonoton Checkout provides an interface for interacting with a user when no point-of-sale personnel is directly involved with the purchase. It offers a way to validate a purchase made on a mobile device.
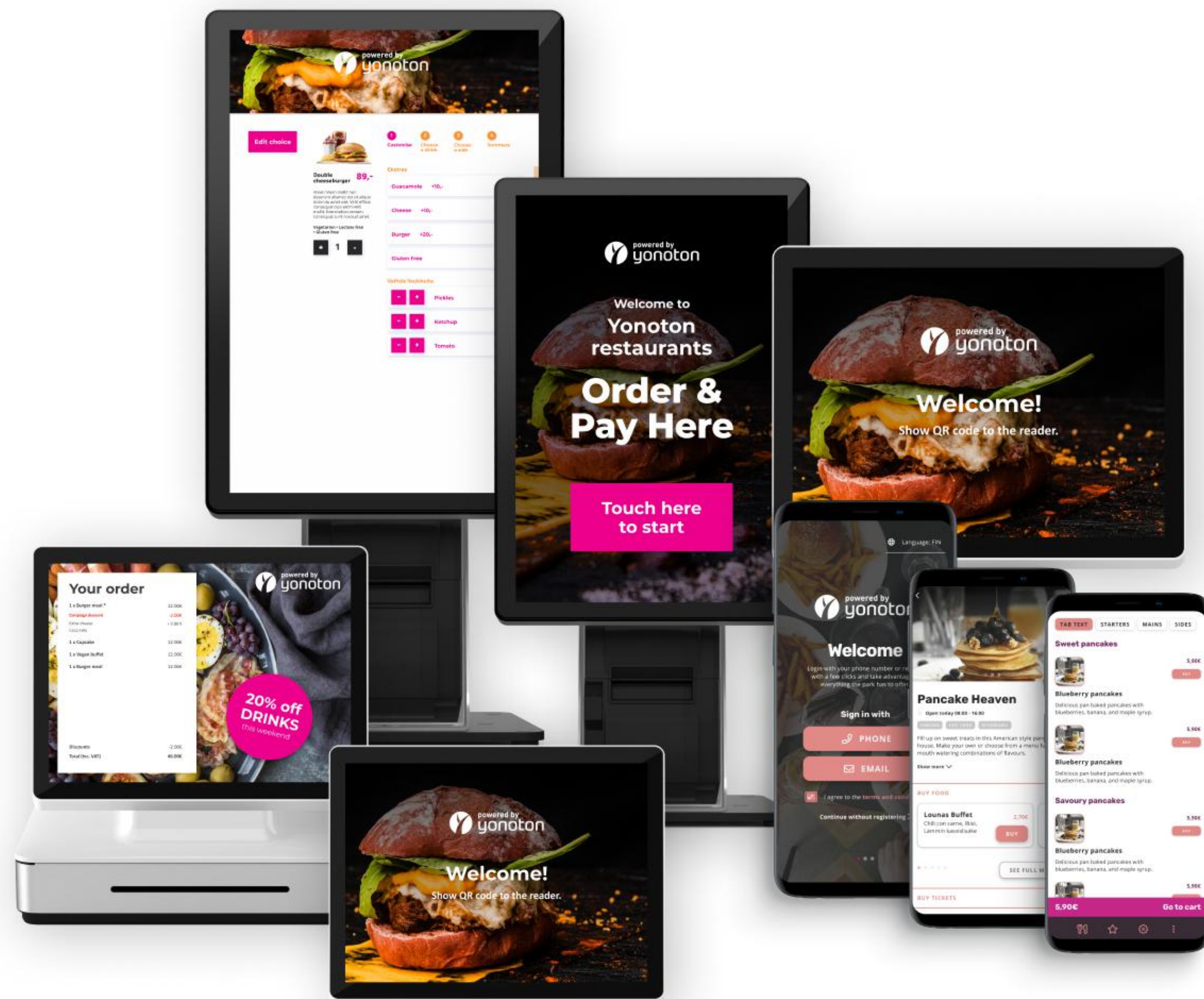
See how the Yonoton Omnichannel works in real life

watch video →

The Digital Platform

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