



Turning code into wine

Access control, wine dispensing and process management with PHP and JS.

by Ralf Schwoebel (@orgaralf)



#APIcon18

Don't drink and root...



What is going on?

wineBANK Palma



enter with smart card

open with key (booooo) soon smart card

dispense wine with smart card

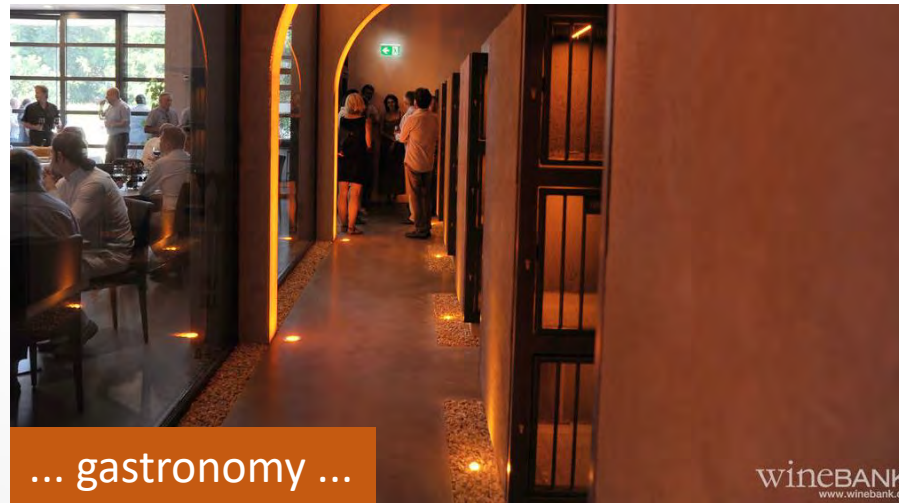
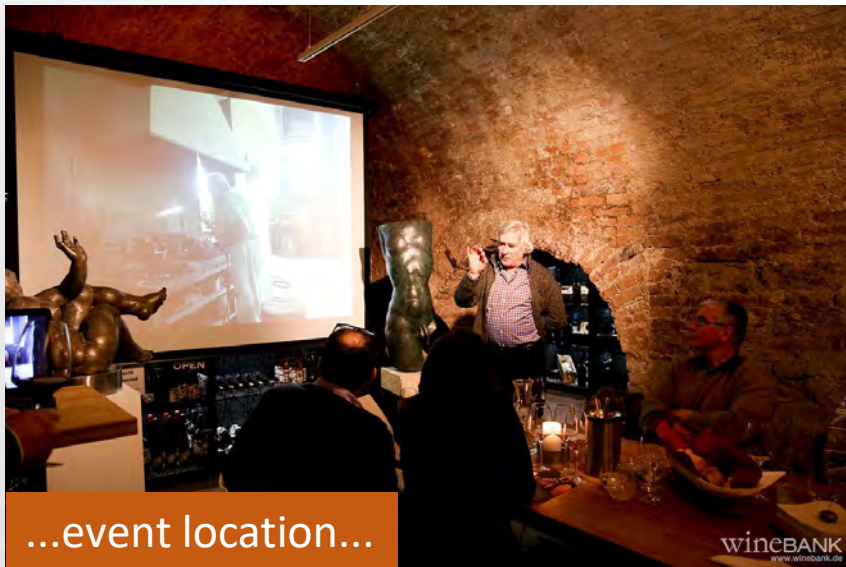
wineBANK

- It is a club
- It is a location to store wine
- It is a location to drink wine
- It is an eCommerce platform
- It is technology driven
- Its success is depending (partially) on **APIs**



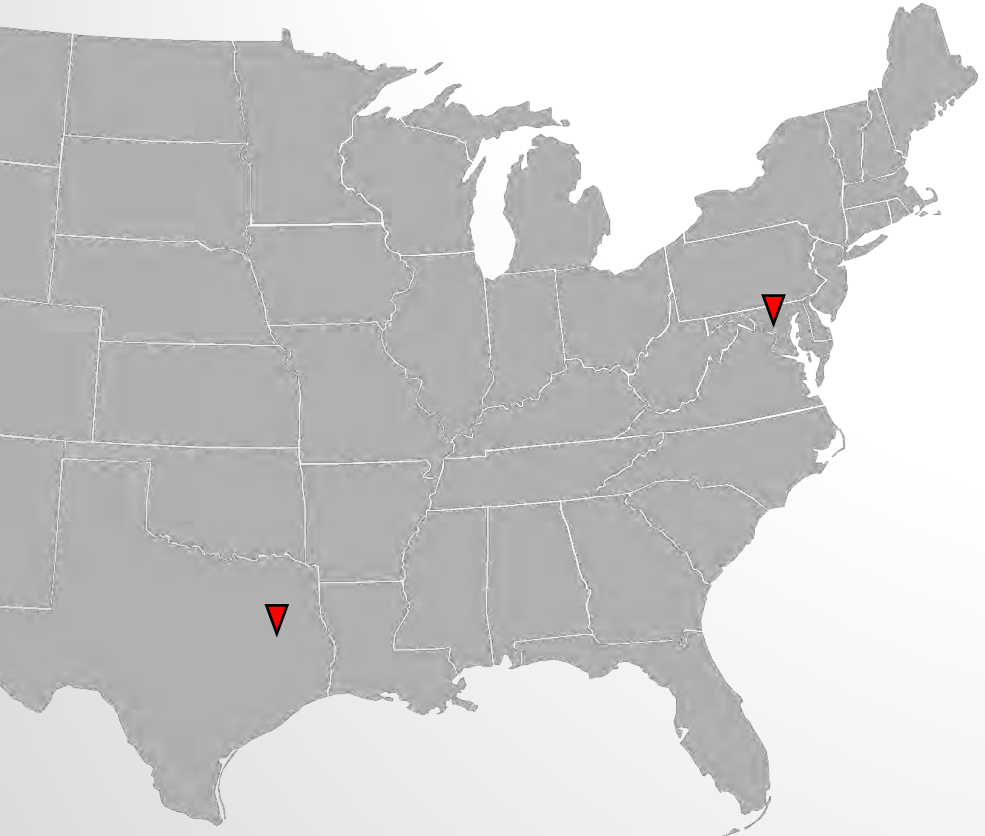
wineBANK smart card

Impressions worldwide

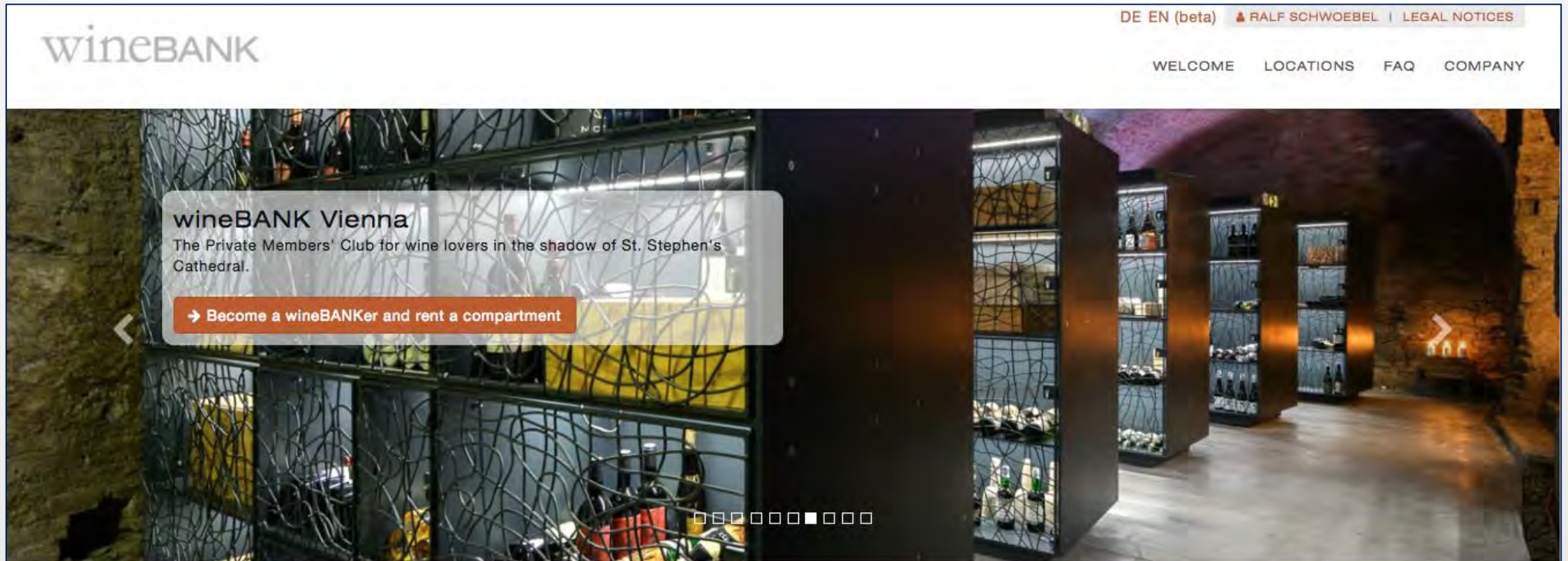


wineBANK.club

And why is that worth a talk on a conference?



wineBANK General Web



"One club. One community. One passion. Wine!"

wineBANK: The Private Members' Club for Wine Aficionados

At our wineBANK locations you can store your valuable wines under perfect conditions and enjoy wine tasting there on the spot with your guests. As one of our members, you have access to the growing number of wineBANK locations – usually 24 hours a day, seven days a week.

14:40

Utmost discretion, a private retreat, pure pleasure – your personal Member's Card opens the door to your very own world of wine. Carried along on a musical wave of cool rhythms, you will glide into the laid-back atmosphere of your wineBANK.

wineBANK eCommerce

Overview of Vienna Wine Vaults



Selecting Wine Vault & Booking
Compartment



wineBANK User Interface

wineBANK

DE EN (beta) [RALF SCHWOEBEL](#) | [LEGAL NOTICES](#)

[WELCOME](#) [LOCATIONS](#) [FAQ](#) [COMPANY](#)

Welcome Ralf Schwoebel

[Logout](#)

wineBANKer menu

- [Overview](#)
- [My dates](#)
- [My friends](#)
- [Account information](#)
- [Change password](#)
- [My invoices](#)
- [Contracts/Cards](#)
- [Book a further compartment](#)
- [Logout](#)

Your wineBANK

Welcome to your wineBANK. Here you will find up-to-date news about your Members' Area.

You would like to book a further compartment?

To simplify the administration of your data, you can only book a further compartment at the location of your choice, when you are logged in.

Basel	Frankfurt	Hamburg
Mainz	Palma	Pfalz
Rheingau	Wien	Mainz

Your account

Name:	Ralf Schwoebel
E-mail:	puzzler@runbox.com
Telephone:	0175-4070111
Fax:	
Last login:	08.02.2018 22:44
wineBANKer since:	08.04.2011
Card Category:	Red

wineBANK User Interface

wineBANK

DE EN (beta) **RALF SCHWOEBEL** | LEGAL NOTICES

WELCOME LOCATIONS FAQ COMPANY

Welcome Ralf Schwoebel [Logout](#)

wineBANKer menu

- Overview
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- Contracts/Cards
- Book a further compartment
- Logout

Contracts/Cards

Compartment 0202 - wineBANK Frankfurt

Vertragsdaten

URL-Services e.K.
Mr. Ralf Schwoebel
Speicherstr. 13
60327 Frankfurt
Germany

[Edit contract data](#)
[Terminate agreement](#)

Vertrag WB-100529

Agreement data: 08.04.2016
Minimum agreement duration: 1 Jahr
Start of agreement: 01.05.2016
End of agreement at termination: 31.07.2018
Monthly rent: 94,05 EUR

[Contract \(PDF\)](#)
[General Terms & Conditions \(PDF\)](#)

Cards

Card number	PIN	Type	Status	Price	#
40161	1345	red	Im Vertrag enthalten	-	Deactivate By the Glass Activated ? Card loss

[Order an additional partner card](#)

Your account

Name:	Ralf Schwoebel
E-mail:	puzzler@runbox.com
Telephone:	0175-4070111
Fax:	
Last login:	10.04.2018 20:56
wineBANKer since:	08.04.2016
Card Category:	Red

wineBANK admin Interface

wineBANK Ralf Schwöbel @ Franchisor DE EN (beta) Franchisor Logout

Location management

- Cockpit
- Agreements
- Customer accounts
- wineBANK compartments
- Cards
- Invoices
- Franchise settlements

Content management

- News & Current affairs
- Press releases
- Press reviews
- Photo galleries
- Videos
- FAQs

Promotion, events

- Benefits
- Promotion codes

Appointment management

- Basic settings

- System user
- wineBANK locations
- System

14:40

News

Entries per page: 10 | 25 | 50 | 100 | All - Results: 53, page 1 / 3

Reset filters All All Search term [Create article](#)

Article image	Date	Article	Info	#
	05.02.2018	wineBANKer's Table Februar 2018 „Das Weingut von Winning aus Deidesheim bestritt den ersten wineBANKer's Table 2018. Der Chef Stefan Attmann brachte einem Rosesekt zwei Sauvignon blanc und vier Rieslinge aus unterschiedlichen Jahre zur Probe mit und stellte die spezifischen Eigenschaften der einzelnen Jahrgänge heraus. Eine kurzweilige und sehr unterhaltsame Weinprobe wurde mit einem lang anhaltenden Beifall goutiert.“	Pfalz Published 0 Pictures	Take offline Delete article Edit Text contents Pictures
	25.01.2018	Italienische Weine by the glass „Nach unserem italienischen Abend können die Weine aus dem Piemont 24/7 in unserem Weinausschank "by the glass" probiert werden.“	Pfalz Published 0 Pictures	Take offline Delete article Edit Text contents Pictures
	03.01.2018	Afterwork- Meeting und Neujahrsgrüße „Liebe Mitglieder der wineBANK Mainz, 2018 läuft und gibt uns einen ersten Anlass, gemeinsam darauf ein Glas Sekt trinken! Dazu laden wir Sie und Euch gerne zu einem Afterwork- Meeting am kommenden Dienstag, 09.01.2018, um 18:00 Uhr ein. Zudem wird uns unser Mitglied Uwe Klein von „WeinKlein“ eine Auswahl Rotwein vom Weingut ALLEGRINI aus dem Veneto vorstellen. Wir würden uns freuen, Sie und Euch zahlreich begrüßen zu dürfen. Der Anlass ist ohne zusätzliche Anmeldung oder Kosten und bildet Grundlage für ein regelmässiges Treffen dieser Art. Auf bald und eine gute Zeit, Harald C. Jaeger & Petar Bjelopavlovic PS: Auch ein guter Moment, die wineBANK- Karte für das by-the-glass- System neu zu aktivieren!“	Mainz Published 0 Pictures	Take offline Delete article Edit Text contents Pictures
	19.12.2017	Weihnachtsgrüße „„Liebe wineBANKer, kurz vor dem Jahresende möchte ich einen Ausblick auf das Jahr 2018 und noch einen Hinweis geben. Am 25. Januar 2018 werden wir mit einem italienischen Abend mit kulinarischen Spezialitäten und Weinen aus dem Piemont starten. Es folgen die wineBANKer's Table im gewohnten monatlichen Rhythmus ab Februar mit dem Weingut von Winning. Danach besuchen uns die Weingüter Zimmermann und Mussler. Die Einladungen werden rechtzeitig an Sie verschickt damit Sie sich in die Gästeliste eintragen können. Unser Caterer, die Metzgerei Hambel, hat in der Zeit vom 20. Dezember 2017 bis 7. Januar 2018 geschlossen. Ich wünsche Ihnen und Ihrer Familie besinnliche und geruhsame Weihnachten und einen guten Start in ein gesundes und glückliches Jahr 2018. Mit vinophilen Grüßen Ihr Christian König““	Pfalz Published 0 Pictures	Take offline Delete article Edit Text contents Pictures
	17.12.2017	Urlaub Metzgerei Hambel „In der Zeit vom 22.12.2017 bis zum 7.1.2018 macht der Cateringservice der Metzgerei Hambel seinen Jahresurlaub. Bitte haben Sie Verständnis dafür, dass in dieser Zeit keine Speisen bestellt werden können. Ab dem 8.1.2018 liefert Ihnen die Metzgerei Hambel wieder Pfälzische Köstlichkeiten in die wineBANK.“	Pfalz Published 0 Pictures	Take offline Delete article Edit

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wineBANK admin Interface II

wineBANK Ralf Schwöbel @ Franchisor DE EN (beta) Franchisor Logout

wineBANK cards Entries per page: 10 | 25 | 50 | 100 | All - Results: 2107, page 11 / 85

Card number	Card category	BTG	PIN	Mode	wineBANK	Customer	#
40511 Active		Deactivated	9505	Included	Compartment: 0201 Agreement: WB-101001 Location: Frankfurt	Aylin K Teleph E-mail: ...ono.de	Activate BTG Dispatch letter Display agreement
40510 Active		Deactivated	9258	Included	Compartment: 15/11 Agreement: WB-101002 Location: Wien	Angelo Teleph E-mail: ...at	Activate BTG Dispatch letter Display agreement
40509 Active		Deactivated	3004	Included	Compartment: 0211 Agreement: WB-101003 Location: Hamburg	Christi Teleph E-mail: ...o.de	Activate BTG Dispatch letter Display agreement
40508 Resend		Deactivated	5814	Included	Compartment: 1304 Agreement: WB-100992 Location: Hamburg	Patrick Teleph E-mail: ...e-radio.de	Activate BTG Dispatch letter Display agreement
40507 Active		Activated	4541	Included	Compartment: 1.122 Agreement: WB-100514	Stefan Teleph E-mail: ...de	Deactivate BTG Dispatch letter Display agreement

Obstacles and learnings

1 location:

1 problem



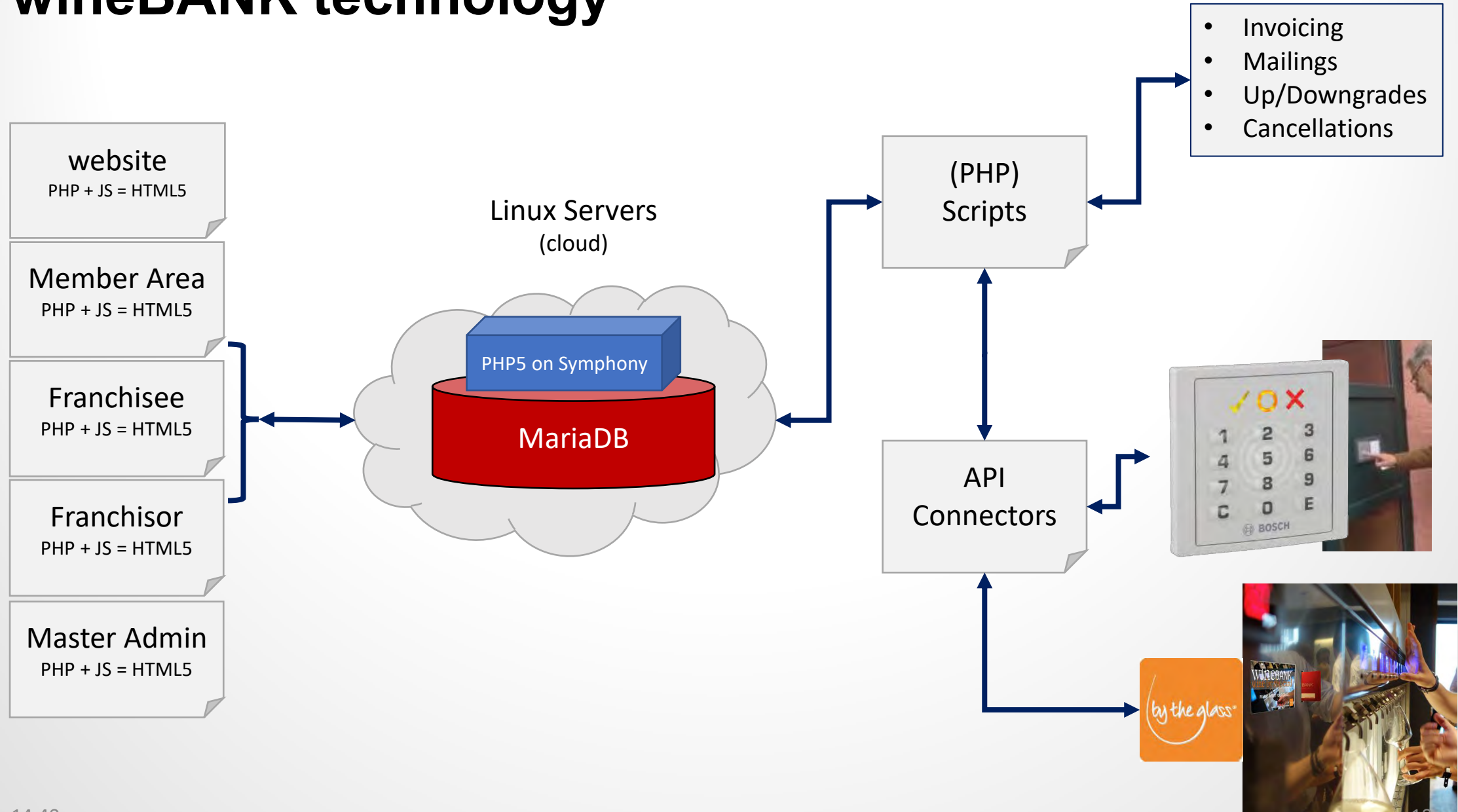
2 Locations:

100 Problems

eg: CHF, Taxes, outside EU, 2 languages more, special handling of signups, promotioncodes



wineBANK technology



wineBANK – Kung Fu Squad

From „one man band“ to development team...



Monolith Code



Symfony based services & classes

wineBANK Code style

The screenshot displays an IDE window for a project named 'winebank'. The main editor shows the file 'index.php' with the following PHP code:

```
1 <?php
2 //include("../etc/conf/init.php");
3 Admin::checkAuth();
4
5
6
7 if($_POST['iv'] == "create") {
8
9     if($_POST['sendmail'] == 'yes') {
10         $strSendMail = "yes";
11     }
12     else {
13         $strSendMail = "no";
14     }
15
16     $sqlQuery = "insert into ".WOPR_DB_PFX."user_invoice_runs
17                 (winebank_id,month,state,sendmail)
```

The interface includes a Project Explorer on the left showing the directory structure, a Version Control panel at the bottom, and a status bar at the very bottom.

Version Control: Local Changes Log

Author	Date	Commit Message
Florian Koller	08.02.18, 16:36	Fix: Translation missing currency:exchangerate:eur:tocurrency
Florian Koller	08.02.18, 09:52	Fix franchise-invoice
Florian Koller	07.02.18, 16:47	GeneratelInvoices Command Fix empty Files
Florian Koller	07.02.18, 15:15	Fix btg templates console generation
petergiertz	07.02.18, 14:23	Merge branch 'master' into btg-rechnungslauf-pdf
petergiertz	07.02.18, 14:21	setBatchFilename
Florian Koller	07.02.18, 13:54	added correct targettimezone Command/GeneratelInvoices
petergiertz	07.02.18, 13:25	Fix
petergiertz	07.02.18, 13:24	Speicherung PDF pro Rechnung bei Rechnungslauf
Florian Koller	07.02.18, 11:21	DemoAction BTG /app/demo/wines improved
petergiertz	07.02.18, 09:45	First Commit
Florian Koller	06.02.18, 19:09	Fixes BTG-Invoices & BTG-API Anbindung

Status Bar: 1:1 LF UTF-8 Git: master 314 of 1208M

wineBANK – the need of the many...

Migration with „Symphony Proxy“: **do not throw** the code away!

```
routing.yml
1  default_index:
2      path: /
3      defaults: { _controller: AppBundle:Default:index }
4
5  pdf:
6      resource: "@WinebankPDFBundle/Resources/config/routing.yml"
7      prefix: /
8
9  winebank:
10     resource: "@WinebankBundle/Resources/config/routing.yml"
11     prefix: /
12
13  winebank_classic_wopr:
14     path: /wopr{trailingSlash}{req}
15     defaults: { _controller: WinebankAdminBundle:Classic:wrap, trailingSlash: "/", req: welcome.php }
16     requirements: { trailingSlash: "[/]{0,1}", req: ".+" }
17  winebank_classic_member:
18     path: /member{trailingSlash}{req}
19     defaults: { _controller: WinebankAdminBundle:Classic:wrap, trailingSlash: "/", req: welcome.php }
20     requirements: { trailingSlash: "[/]{0,1}", req: ".+" }
```

wineBANK Code Explosion

- 2 languages
- 5+ tax regions (eg. Austria has something special)
- PDF, XML, CSV generation
- Cross border invoicing with 5x5 cases
(Eg: invoice from Palma to London wineBANKer for BTG)
- 2 evolving APIs, third to come
- Upgrades / Downgrades / Missing Cards, etc.



Integration Example

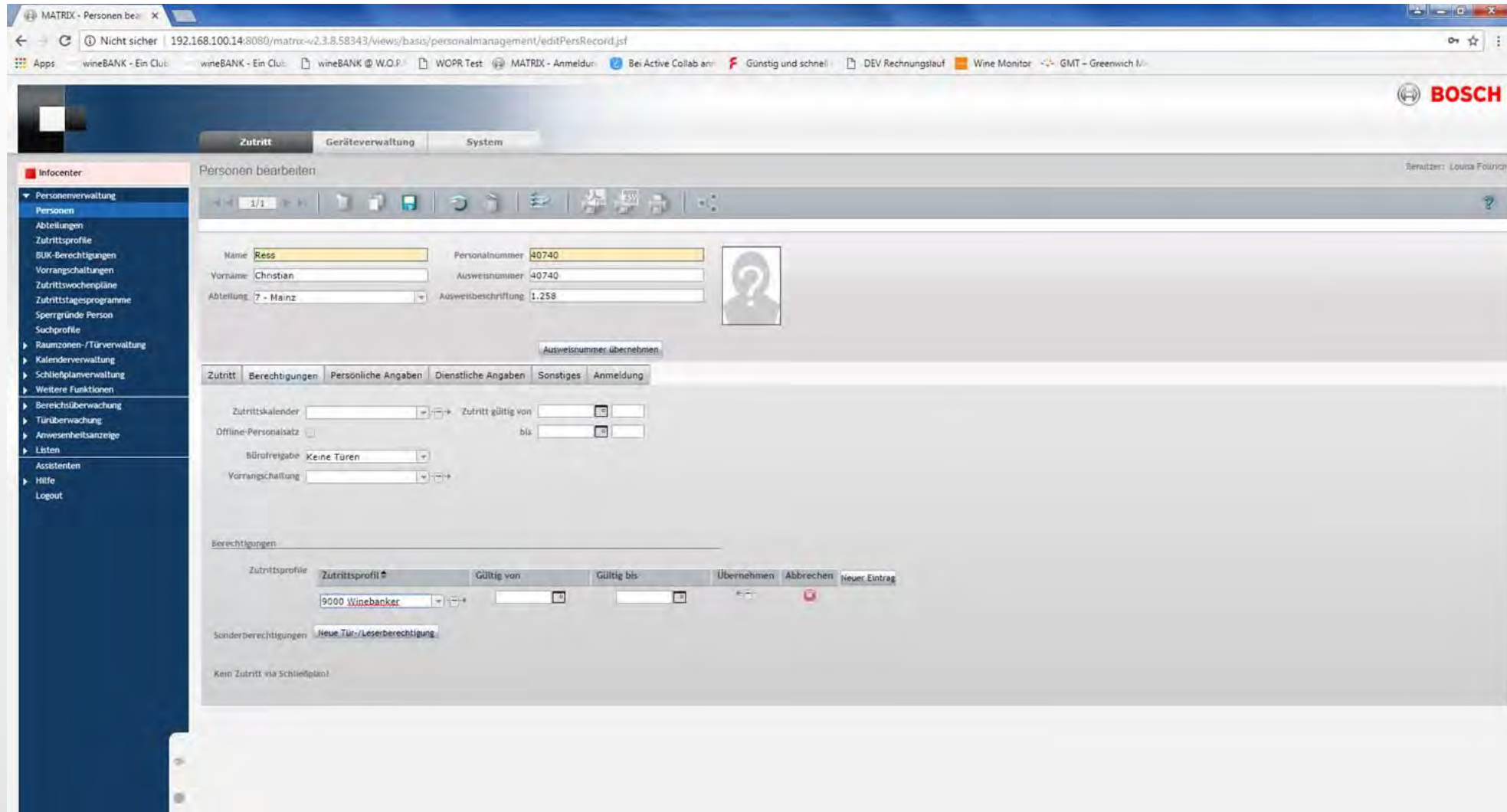
Let's start simple: Opening Doors

- Cards are produced in bulk: RFID+PIN (card has a number on it)
- Cards are delivered to wineBANK with XLS file
- Membership is sold: card is assigned to contract
- 1 contract can have N cards in X locations (think spouse / team)
- Card code is transferred to all BOSCH systems
- Card is mailed to member: working!



Opening Doors with code

- Backend = proprietary Java Pages in German



Opening Doors: the obstacles

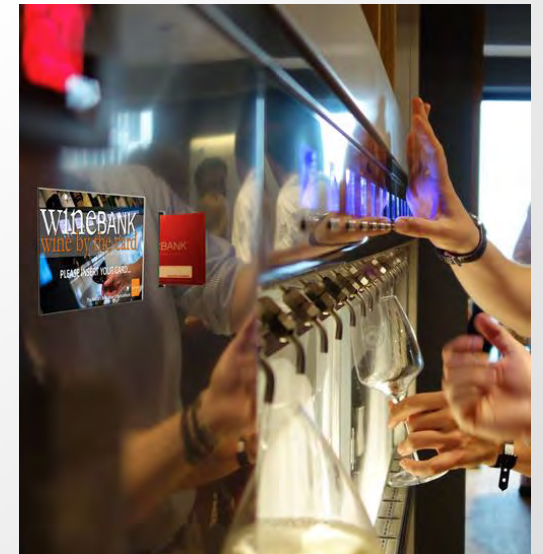
- Manual card registration in 2 systems
- FTP pull system, no condition reporting (we have to check FTP log)



real API

Now more seriously: Code, give me wine (BTG)!

- Embedded Windows (sigh) machines
- Connected via local network (Cable, DSL, LTE) to Czech server
- Franchisee needs to administer the machine CLEANLY!
- Each „click“ converts into a database entry
- Cards are supposed to work globally
- A spanish wineBANKer receives an invoice from London after drinking there: tax and legal!



Tevino Matas S.L. - Carrer de Concepción 9- 07012 Palma de Mallorca

URL-Services e.K.
Ralf Schwoebel
Speicherstr. 13
60327 Frankfurt
Germany

Contact persons: Peter Eicker
Telephone: +34 694 433 127
E-mail: palma@winebank.es
Palma, 13.03.2018

Invoice 00006

Dear Herr Schwoebel,

We herewith invoice the following By the Glass wine items:

Card number 40161	Total €11.45
	Net amount: €11.45
	10% VAT: €1.15
	Invoice amount: €12.60

Please pay the specified amount via **bank transfer** within 10 days.

Tevino Matas S.L. - Carrer de Concepción 9- 07012 Palma de Mallorca

URL-Services e.K.
Ralf Schwoebel
Speicherstr. 13
60327 Frankfurt
Germany

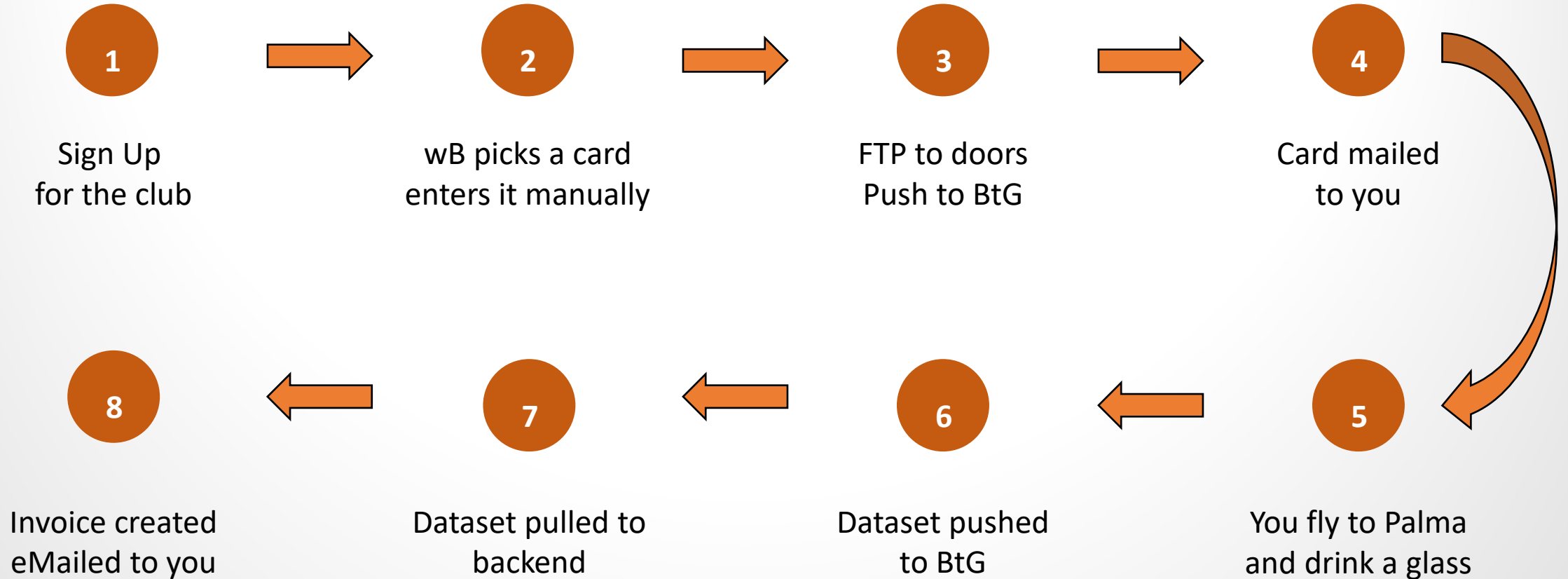
Contact persons: Peter Eicker
Telephone: +34 694 433 127
E-mail: palma@winebank.es
Palma, 13.03.2018

Invoice attachment: Itemised positions

Date	Card no.	User	Quantity (ml)	Vintage	Name	Variety	Producer	Origin	Amount (gross)
Feb 2, 2018	40161	Schwoebel, Ralf	70ml		Una Cepa				€5.65
Feb 3, 2018	40161	Schwoebel, Ralf	100ml		Maruccia Callet de Familia 2014			Mallorca	€6.95

PDF Screenshot

Code, give me wine (BTG)!



Code

The image shows a screenshot of an IDE with a project structure on the left and a code editor on the right. The project structure includes folders like AppBundle, Service, and various PHP files. The code editor displays the content of BTGApi.php, which includes a namespace declaration, a use statement for UtilityTrait, a class definition for BTGApi, and a constructor method.


```
1 <?php
2 /** @author Florian Koller fk@conlabz.de ...*/
6 namespace AppBundle\Service;
7
8 use UtilityTrait;
9
10 /**
11  * * @todo implement isValidResponse function for BTG API
12  *
13  * Class BTGApi
14  * @package AppBundle\Service
15  */
16
17
18 class BTGApi
19 {
20     use UtilityTrait;
21
22     /** @var Client $client */
23     protected $client = null;
24
25     protected $token = null;
26
27     protected $companycode = null;
28
29     protected $username = null;
30
31     protected $password = null;
32
33     protected $defaultDateFormat = 'Y-m-d';
34
35     protected $logger = null;
36
37     public function __construct(Client $client,
38                               $token = null,
39                               $companycode,
40                               $username = null,
41                               $password = null,
42                               $logger)
43     {
44         $this->client = $client;
45         $this->token = $token;
46         $this->companycode = $companycode;
47         $this->username = $username;
48         $this->password = $password;
49         $this->logger = $logger;
50     }
51 }
52
53
54
55
56
57
58
59
60
61
```

Obstacles

- 3rd party has different views on how to code
- There is no real staging, because the state differs (always)
- There is no Sandbox from the BtG side
- The franchisee names the wine list: AN\2
- Time and deadlines: 4 entities on 1 process!




Obstacles



Wine Monitor Online
The World's Best Wine Entertainment

DISPENSERS

winebankapi 

OVERVIEW

BOTTLE CONDITIONS

DISPENSERS

WINES

CARDS

BRANCHES

REPORTS

WINES

SALES

CREDITS

SETTINGS

COMPANY

BRANCHES

DISPENSERS

USERS

ADMINISTRATION

IMPORT CARDS

IMPORT CUSTOMERS

CUSTOMERS (PIN)

CONTACTS

By The Glass International B.V.
 Haarlem, The Netherlands
info@bytheglass.eu
www.bytheglass.eu
 Software created by
 CESK a.s. bytheglass@cesk.cz

...

WineBank

...

Tevino Matas SL

...

10250141 - Palma 1

Refresh

POSITION: 1 | EDIT


TITLE: Pere Negre

DESCRIPTION	VOLUME	VINTAGE	ORIGIN	PRODUCER	VARIETY
WEISS	750				

DOSE	PRICE
25 ml	1.45
70 ml	3.65

POSITION IS BLOCKED

UNBLOCK


RESIDUE 55 ml


LAST CHANGE 02/02/2018

POSITION: 2 | EDIT

TITLE: Pere Negre

DESCRIPTION	VOLUME	VINTAGE	ORIGIN	PRODUCER	VARIETY
WEISS	750				

DOSE	PRICE PER PIECE	PIECES	PRICE
25 ml	1.45	2	2.90


RESIDUE 600 ml

LAST CHANGE 03/02/2018

BLOCK

POSITION: 3 | EDIT


TITLE: Bragato Sauvignon 2014

DESCRIPTION	VOLUME	VINTAGE	ORIGIN	PRODUCER	VARIETY
	750		Friaul/Italy		

DOSE	PRICE
25 ml	1.65
70 ml	4.15
100 ml	5.95

POSITION IS BLOCKED

UNBLOCK


RESIDUE 90 ml


LAST CHANGE 02/02/2018

POSITION: 4 | EDIT

TITLE: Bragato Sauvignon 2014

DESCRIPTION	VOLUME	VINTAGE	ORIGIN	PRODUCER	VARIETY
	750		Friaul/Italy		

DOSE	PRICE PER PIECE	PIECES	PRICE
25 ml	1.65	15	24.75
70 ml	4.15	4	16.60


RESIDUE 90 ml

LAST CHANGE 02/02/2018

Learnings

The customer has the idea,

but you need to design much more than code:

- Anticipate future expansion: **cut your functionality in services!**
- Basic project management: **external APIs change without warning!**
- Testing and automation: **come up with a solid test scenario!**
- International process design: **fix the characteristics before typing!**

Thank you!

Thank you for your time and attention...
Have a great conference!

Next - 12.15:

- **Securing APIs and Microservices with OAuth and OpenID Connect – Room C**
- **Micro Frontends – Auditorium**

Ralf Schwoebel, CEO

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