

Z.E. READY™ v1.2

ZER 38

Qualification process

By Renault **DGT VE**

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Z.E. ZERO EMISSION VEHICLES

What is « ZE READY »?

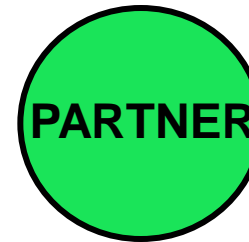
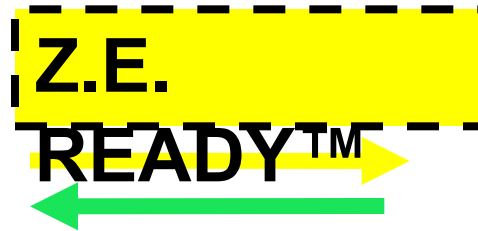
- **ZE READY™** is a **quality label** owned by Renault that ensures full compatibility when charging a Renault ZE car on a charging station.
- It anticipates upcoming standards and regulations related to electric vehicles charging. It introduces **specific requirements** that guarantee **safety** and **performance**. These requirements have been built altogether with ZE READY workshops members.
- It is a **trademark** granted by Renault to **ZE READY Partners**. These Partners can be charging stations suppliers, or mobility operators, or utilities etc...
- ZE READY deals with the compliance of the installed charging station (i.e. **product and installation**).

The ZE READY™ brand

- **ZE READY™** is a Renault **trademark** dealing with installed charging stations.
- The right to use the trademark is only given for companies herein called **Partners** that have control on the product and its installation.
- The right to use the trademark is done through a **licencing contract** which specifies the technical (products references), geographical (countries) and time (date and duration) perimeters and other conditions upholding this right (e.g. **exemptions** respect).
- The first version of **ZE READY**, i.e. **ZE READY 1** will be followed by **ZE READY 2** later this year.

ZE READY stakeholders

The **Partner** must demonstrate to **Renault DGT VE** that charging stations and installation process successfully comply with ZE READY expectations.



- ZE READY Commitment signed + qualification exam file:
- Products identification
- Products self compliance
- Successful integration tests at Renault
- Installation process under control

Then Renault grants to the Partner the right to use the **ZE READY™** brand.

How is ZE READY™ granted?

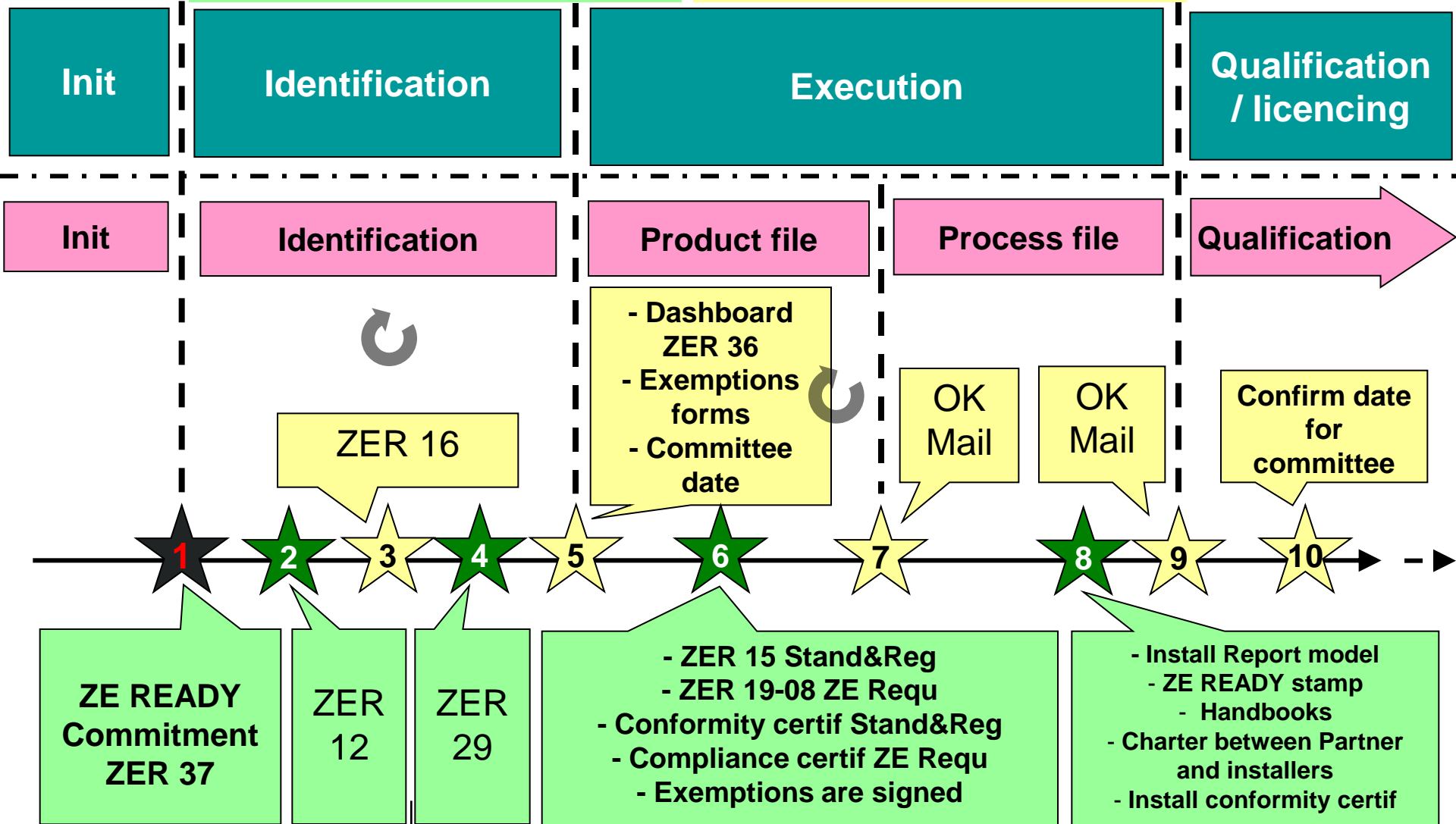
- To receive the **2011 licence**, the **Partner** must:
 - Sign the **ZE READY Commitment ZER 37(*)** where he commits himself to follow the process described hereafter
 - Obtain the **ZE READY 1** product and process qualification
- The qualification is given by the **ZE READY** committee led by the **DGT VE**. The committee meets every Friday PM, possible exceptions to see case by case. The Partner must present his exam qualification file to the committee.
- The qualification is made in four steps:
 - **Initialization**
 - **Identification**
 - **Execution (product self compliance, successful integration tests, and installation process under control)**
 - **Qualification/ licencing**

() For those who signed the ZE READY commitment document distributed by Renault network, this signature is not necessary. ZER 37 can also be integrated in a larger contract.*

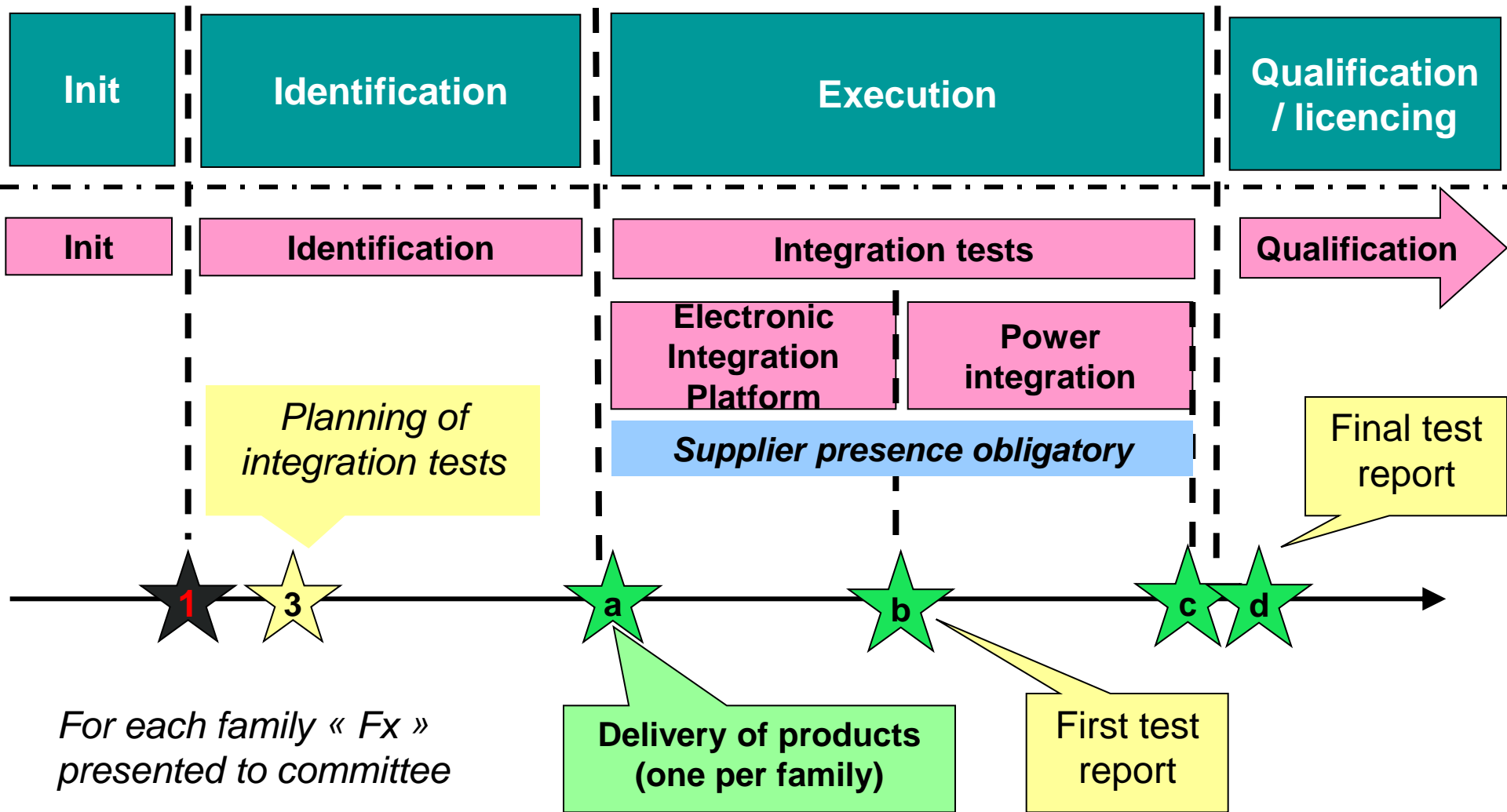
Master planning: product and process

Green = Partner action

Yellow = Renault action

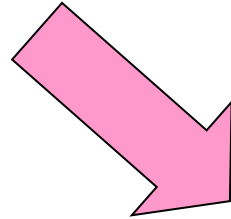


Master planning: integration tests



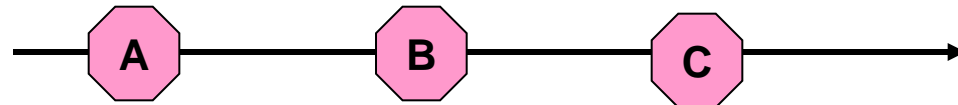
Master planning: qualification

Product and Process



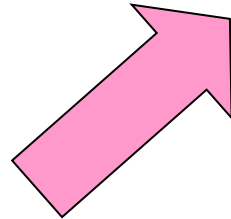
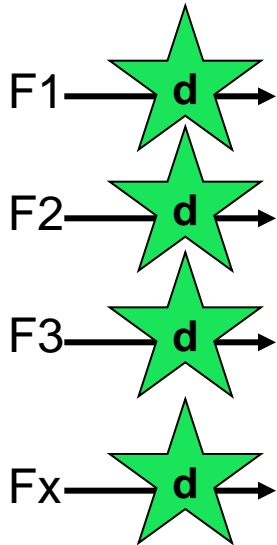
ZE READY committee

Co-signature of licencing contract



- Feedback on qualification
- Licence agreement is sent to Partner

Integration tests



Identification

- **General table ZER 12 (Excel) completed. Contains:**
 - **Suppliers** and **Partners** names
 - Product(*) **references** and their **country** perimeters
 - Forecast **dates** for availability of qualification file
 - The explanation to fill **ZER 12** is given in ZER 12 bis. This file will be renamed **ZER 16** with Renault complementary information and sent back to Partner.
 - Products are gathered in **families(**)** for integration tests at Renault. The tested products must be identified.
- **Products description sheets ZER 29 (Excel) completed. Contains:**
 - Product **families** « mother and children » (one family per sheet, one column per product)
 - **Pictures** of products
 - **Specifications** (please mention if simplified mode 3 is implemented)
 - Applicable countries (like in ZER 12)
 - How protection devices are split between station and upstream installation
 - Other functions (out of ZE READY scope)...

** Product = charging stations and accessories*

*(**) Family = group of products with similar features that enable to submit only one mother product for integration tests*

Execution: products self compliance

- **ZER 19-08** (requirements table) filled in and commented (please provide more info than just “OK” or “NOK”). Clearly mention what product families are concerned. Mention global acceptance or exemptions requests.
- **ZER 15** (list of standards and regulations) filled in and commented. Add local standards and regulations. Identify whether or not product was certified by third party. Clearly mention what product families are concerned. Mention global acceptance or exemptions requests.
- **Self conformity tests files** (one file per family).
- **Compliance certificate for ZE READY requirements** listed in table **ZER 19-08** for the whole product family concerned with possible accepted exemptions. Must be written by Quality department.
- **Conformity certificate for standards and regulations** listed in table **ZER 15** for the whole product family concerned with possible accepted exemptions. Must be written by Quality department.
- For **ZER 19-08** and **ZER 15**, **exemptions requests** must be drawn up by Partner with technical justifications, actions roadmap and time limits.

Execution: integration tests

- Two levels of tests are considered for integration:
 - Tests on **electronic integration platform**
 - Tests on **power electronics bench**
- Tests are carried out for each candidate family. The family mothers must be sent to Renault labs
- These tests are meant to check compatibility between station and Renault vehicles. They are not a substitute for self conformity tests made by the product supplier.
- These tests are concluded with reports that specify the possible actions for the supplier.

Execution: installation under control

- This step is essential for the ZE READY qualification. It ensures that the installation process is adapted to each candidate family, each country, and that installation respects **suppliers recommendations** and **ZE READY specific requirements**.
- It ensures that **installers** and **Partners** are in a mutual commitment process to guarantee the quality of the installation (through training, tools, information...). Generally, the existence of a **charter** between these parties demonstrate the respective commitments.
- The following elements are needed to prove that installation process is under Partner's control and that the electric fitter will correctly install the charging station:
 - **Installation Report** model, see **ZER 24** (ex ZER X1) for guidelines
 - **ZE READY stamp model**, see **ZER 24** (ex ZER X1) for guidelines
 - **Products handbooks** (for installation and for use)
 - **Charter** between Partner and installers
 - **Certificate** proving that installation process is conform with ZE READY requirements and is under Partner's control
 - Extra: a **database** (or web platform) open to Renault for reporting on ZE READY installed products

Qualification/ licencing

■ Qualification

- The qualification file must be sent to the **DGT VE** no later than one week before the ZE READY committee
- Technical committee
 - Renault : DGT VE / DGMPE / DIESE / DQ
 - Partner and supplier(s)
- Review of the qualification file with the Partner. Identification of missing elements. A list of actions is followed by the DGT VE.
- As soon as Partner completes actions, ZE READY qualification is delivered and Partner is informed

■ Licencing

- A qualification form is sent to Renault's **legal department** who draws up the licence contract project on this basis
- The conditions for the use of the **ZE READY™** brand are added in the licence contract

Renault network equipment

- For Partners and suppliers involved in the equipment of Renault dealerships, the following process is applied:
 - Charging stations may be **ordered** by Renault dealerships as soon as ZER 37 (or ZE READY Commitment) is signed, exemptions are accepted by both Partner and DGT VE, and first integration tests are passed
 - Charging stations may be **delivered** as soon as products self compliance (= Product file) is demonstrated by Partner
 - Charging stations may be **installed** as soon as installation control (= Process file) is demonstrated by Partner
 - Charging stations may be **commissioned** as soon as ZE READY qualification is delivered by Renault DGT VE

Synthesis: documents to be produced (ZER 36 1/2)

ZER 36 1/2- List of elements to send to Renault								July 6th 2011	
Step	Topic	Name	Description	Number of copies	Partner	Supplier	Related file	Comments	
Initialization	Commitment	ZER 37- ZE READY commitment	1 Commitment to follow qualification process	One	X			to sign	
Identification	Identification	ZER 12- General table	2 Products, families, countries, dates	One file	X	or X		to fill	
		ZER 29- Products description sheets (ex ZER X3)	4 Specifications, pictures, families	One file with one sheet per family	X	or X	ZER 12	to fill	
Execution	Self compliance (Product file)	ZER 19-08 ZE READY Requirements (ex ZER X6)	table completed and commented	Free. One sheet per family?	or X	X		to fill and comment	
		ZE READY Requirements compliance certificate	Signed by Quality Director	Free		X	ZER 19-08	to create	
		ZER 15- List of standards and regulations	table completed and commented	Free. One sheet per family? One per country?	or X	X		to fill and comment	
		Standards and regulations conformity certificate	6 Signed by Quality Director	Free		X	ZER 15	to create	
		Self conformity tests file		One per family		X	ZER 15 and 19-08	to create	
		Exemptions forms signed	Signed by Renault and Partner	One per exemption	X			to sign	
		Exemptions requests	With justifications	Free	X			to create	
	Integration tests	Charging stations	a To Renault labs	Mothers only	or X	X	ZER 12	to ship	
	Installation (Process file)	Installation Report model	See ZER 24 (ex X1) and X2 as example	Free	X		ZER 24	to create	
		ZE READY Stamp model	See ZER 24 (ex X1) and X2 as example	Free	X		ZER 24	to create	
Products handbooks (for installation and for use)		8 For mother products	Mothers only	or X	X	ZER 24	to create		
Partner and installers charter		Charter between Partner and installers	Free	X			to create		
	Installation control certificate		Free	X			to create		

Dashboard for follow-up of countries (ZER 36 2/2)

Z.E. READY 1™					Partenaire										
A					B		C		D	A			B	C	
1	2	3	4	5	6	7	8	9	10	A	B	C			
OK	OK	OK	OK	OK	OK	OK	OK	OK	S26	S24	S25	S27			
F1	a	b	c		d	e	f	g		😊		C			
	OK	OK	OK	OK											
F2	a	b	c		d	e	f	g		😊		C			
	OK	OK	OK	OK											
F3	a	b	c		d	e	f	g		😊		C			
	OK														
F4	a	b	c		d	e	f	g		😊		C			
	OK														
F5	a	b	c		d	e	f	g		☹️					
F6	a	b	c		d	e	f	g		☹️					

OK
 En cours
 En retard
 A venir



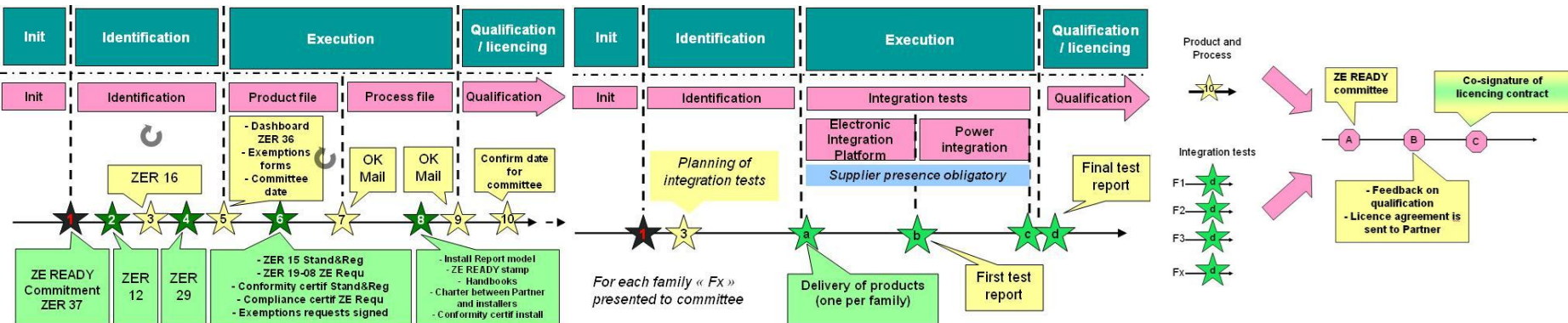
Autorisation de	Commande	Livraison	Installation	mise en service
	A	B	C	D



Candidat autres pays

F1	Show Room réseau Renault , Etablissements			
F2	Coffret Professionnels, réseau et , Etabl. Renault			
F3	Borne domestique Client final			
F4	Borne sur pieds parking			
F5	Borne charge rapide			
F6	Borne charge rapide mixte			

- (1) Sous conditions d'engagement de réaligement si Pb en validation
- (2) Mobilisation définitive du réseau d'installateur sur feu vert Renault



Exemption form example

Z.E.&E.V. READY exemption

N° XReq036
Date: 2011 July 1st
Company Name: EVPARTNER

Exemption Type: Product Proc 22

Geographical area:

Duration: Temporary

All countries unless following:

Following countries:

6 Months

France

Working:

1-2: WCB out off on type 2

23-24: WCB out off on type 2

Exemption related to: standard requirement

ZER 15

ZER 19-08

Product families concerned

F1	Wall box single phase 3,5 kVA	XXXXXXXXXX	EV SUPPLIER
F2	Charging station 22kVA	XXXXXXXXXX	EV SUPPLIER

Topic

The ZEBEV READY requirements N° 1-2, 23, 24 specify in particular some expectations on regards electric safety of J7 and J11 of standard IEC 61851-1 ED 2.0 about the conditions of use of a socket Route 11P X0B (type 2 socket Route 1, type 1 or 2 connector in case of attached cable).

Provided that Low Voltage Directive will allow until 2014 to apply older version of IEC 61851-1 for charging station CE compliance, provided that EVPARTNER commits to update definition of charging stations candidate for ZEBEV READY and intended to charge ZEBEV Renault electric vehicles.

Exemption and corresponding conditions for the products

It is accepted to consider in the scope of ZEBEV READY, charging stations that would not comply with requirements N° 1-2 and 23, 24 of table ZER 19-08 under following additional conditions:

- The reliability and durability of charging station contractor will be communicated to Renault for the ZEBEV READY qualification (deal line July 15th).

EXEMPTION REQUEST ACCEPTED

FOR EVPARTNER

Name:

Title:

Date:

Signature:

FOR RENAULT

Name:

Title:

Date:

Signature:

Requirement number

Topic explanation and exemption conditions

Partner and DGT VE signatures

Time limit

Countries

Products

Status (accepted or not)

ZER 38
July 6th 2011

CONFIDENTIEL B
RENAULT

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