Programming luminaire components – Easy data management over the entire lifecycle (Zhaga Books 24 & 25)

September 29, 2021

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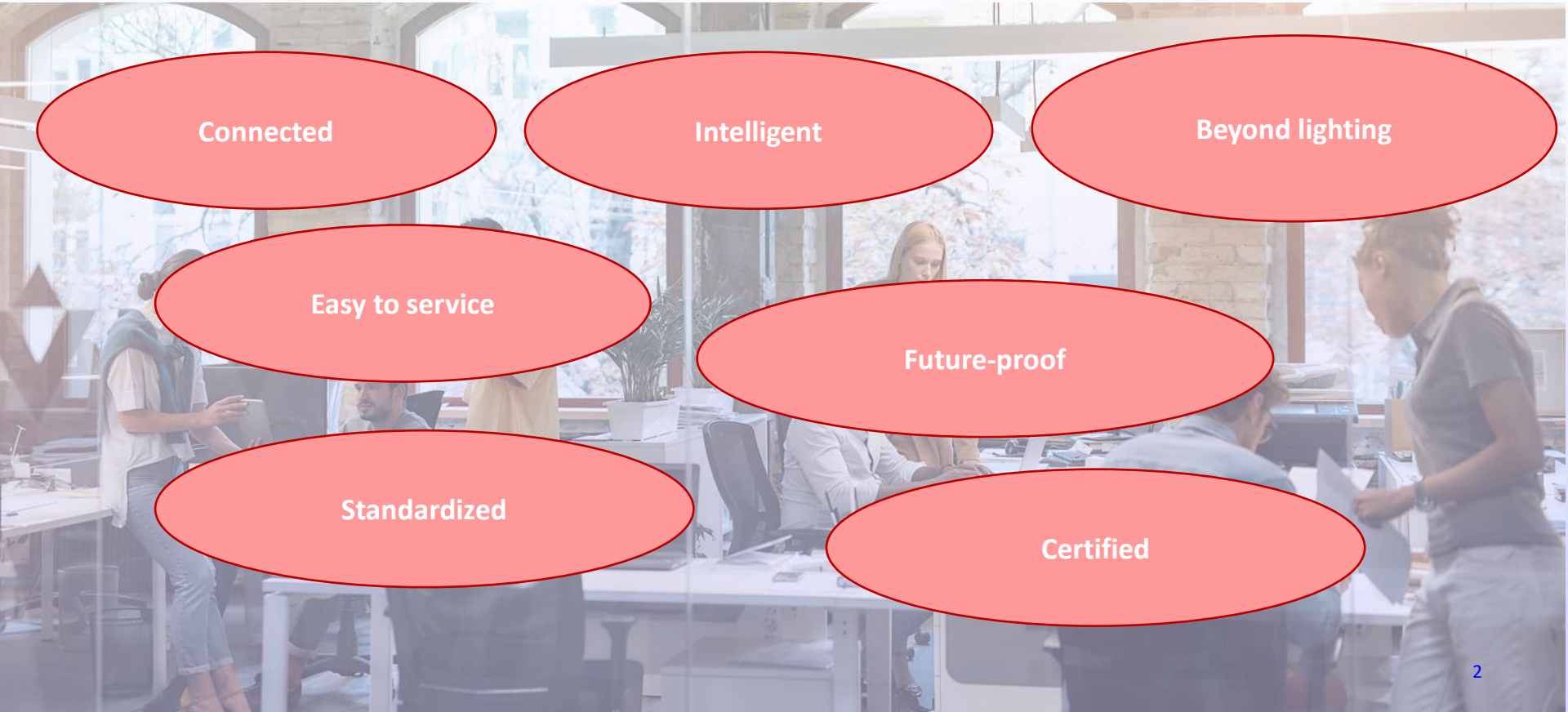
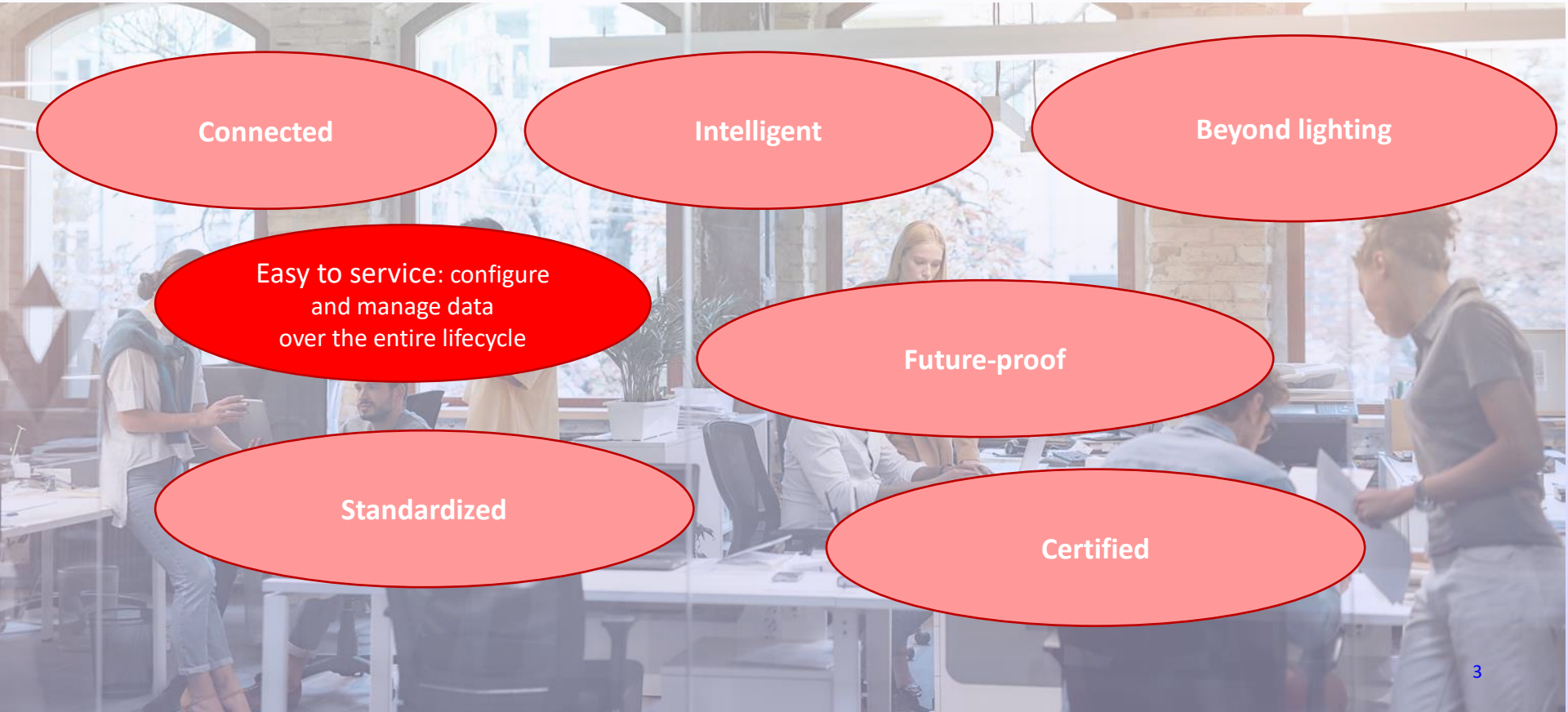
The Zhaga Consortium

Smart and Easy to Service LED luminaires

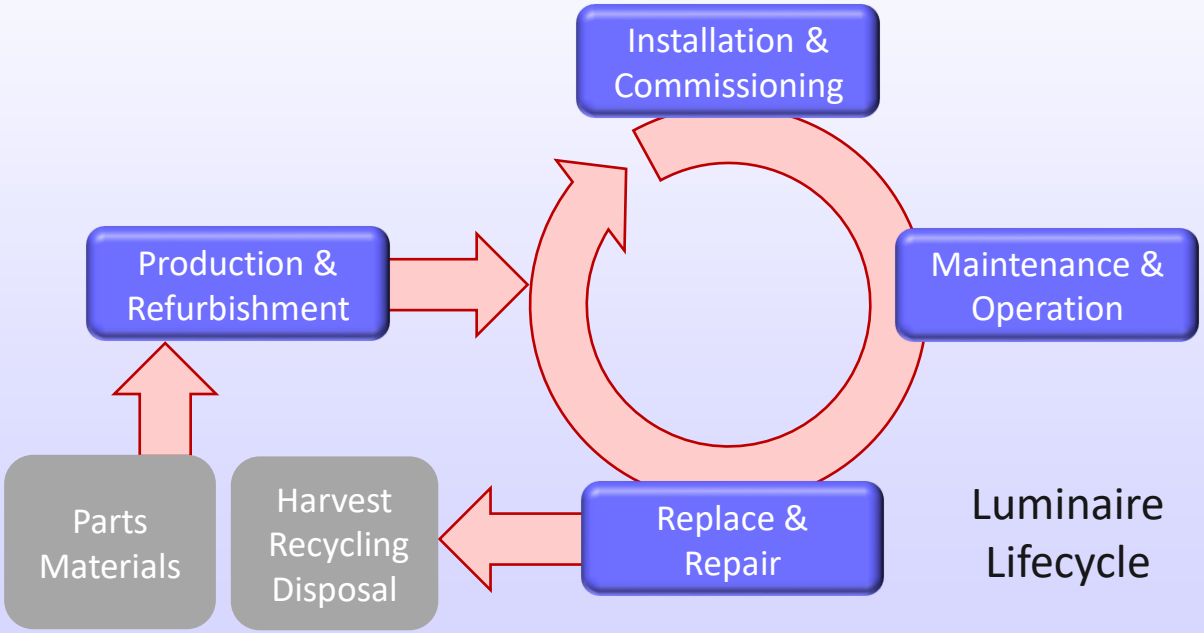


Smart and Easy to Service LED luminaires



Manage data over the luminaire lifecycle

An increasing number of lighting applications requires the configuration of LED drivers and the reading of parameters (current, timers, ...) throughout the product lifecycle.



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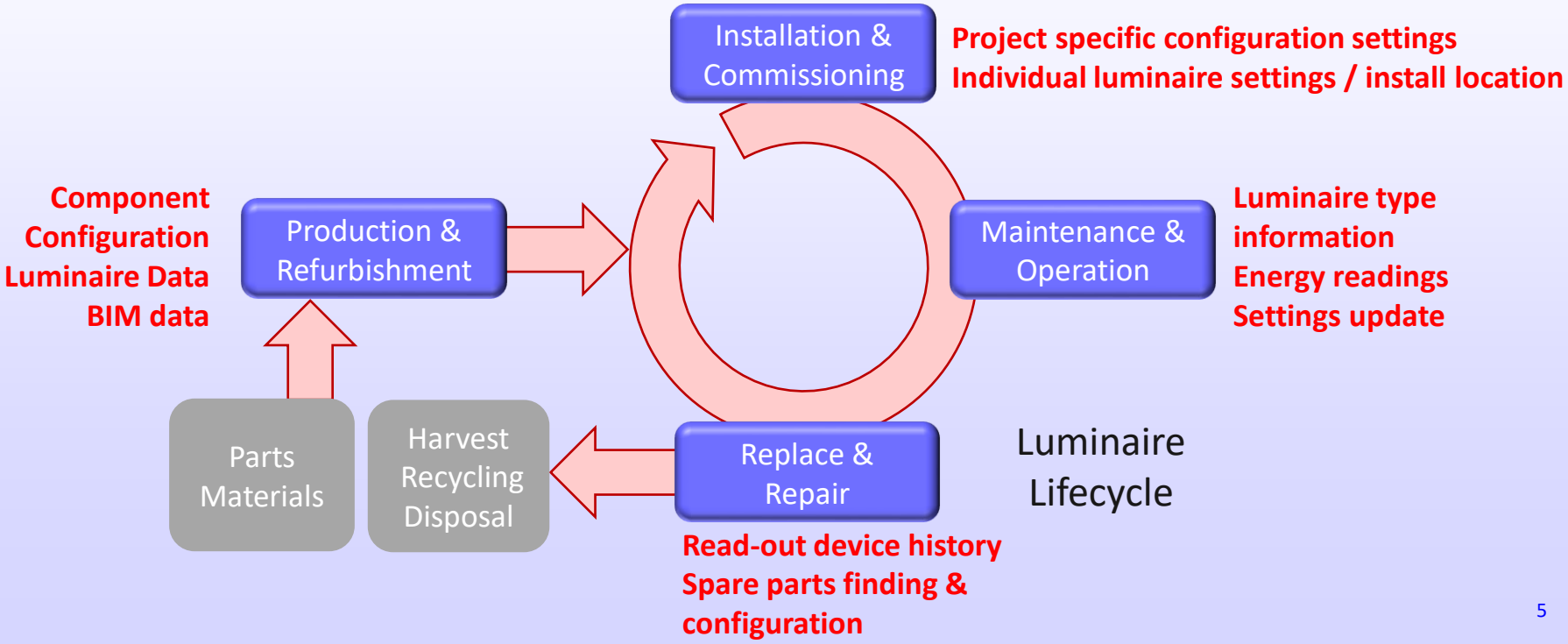
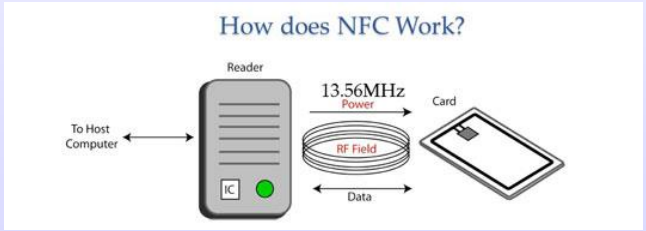


The Problem

Manufacturers of LED luminaires currently use a variety of methods for configuring LED drivers and reading parameters throughout the product lifecycle.

- Resistor (LEDset)
- DALI
- NFC (e.g. SimpleSet)



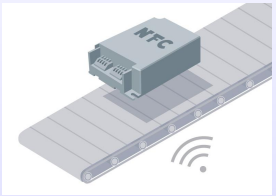
Maintenance staff needs to manage all these methods with different tools.

The Solution

Zhaga NFC based programming at the OEM and in the field covering the entire luminaire lifecycle with interoperable maintenance tools enabling easy to service, configurable luminaires

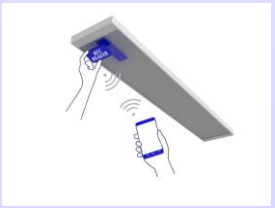
Book 24:

A method of programming luminaire components using NFC during production time



Book 25:

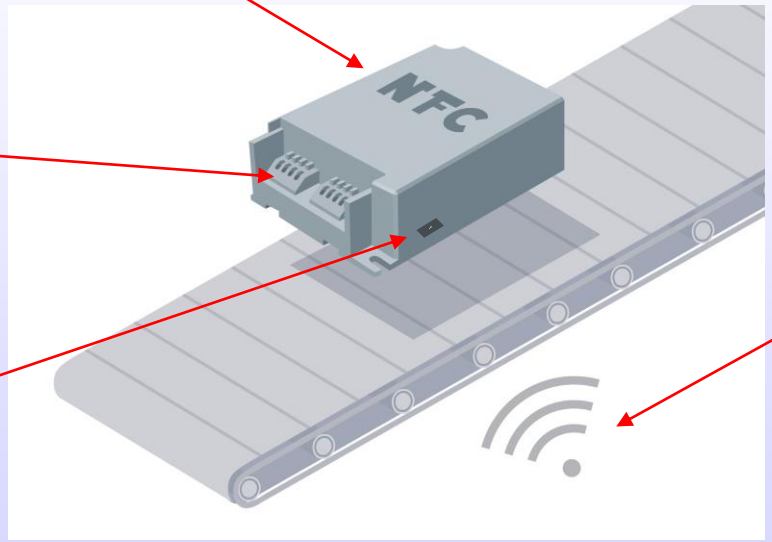
The capability to do field maintenance using mobile NFC readers.

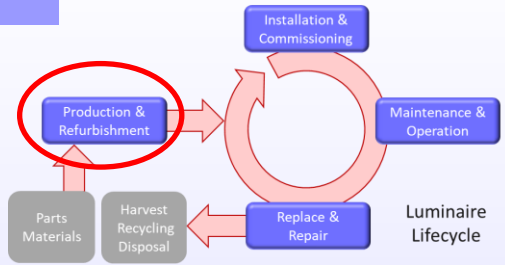


NFC programming at the OEM (Book24)

Luminaire production site

NFC capable component





No need to power up

NFC Tag inside

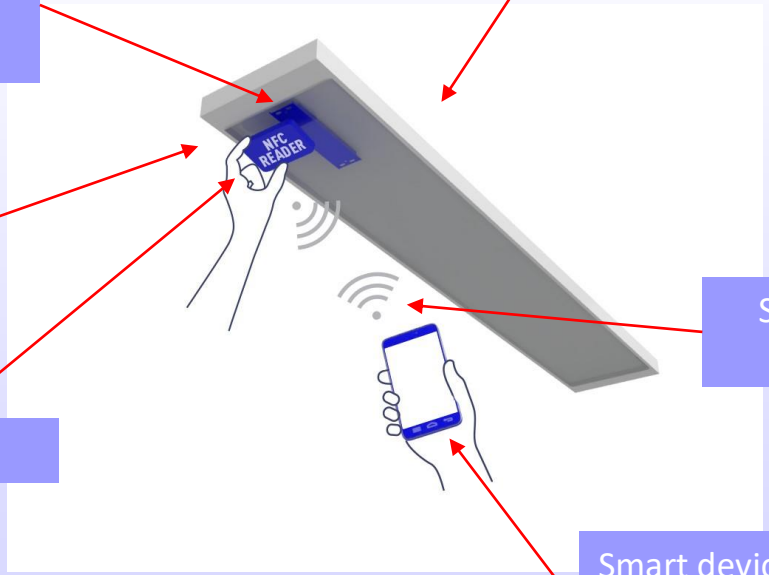
Wireless programming using ISO 15693 standardized NFC protocol

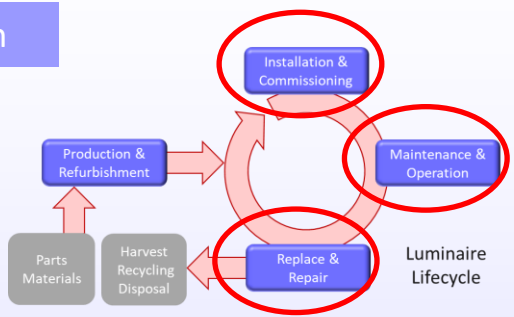
Luminaire specific parameters + vendor specific data

NFC programming in the field (Book25)

Luminaire at install location

NFC capable component with NFC tag inside (may be out of function)





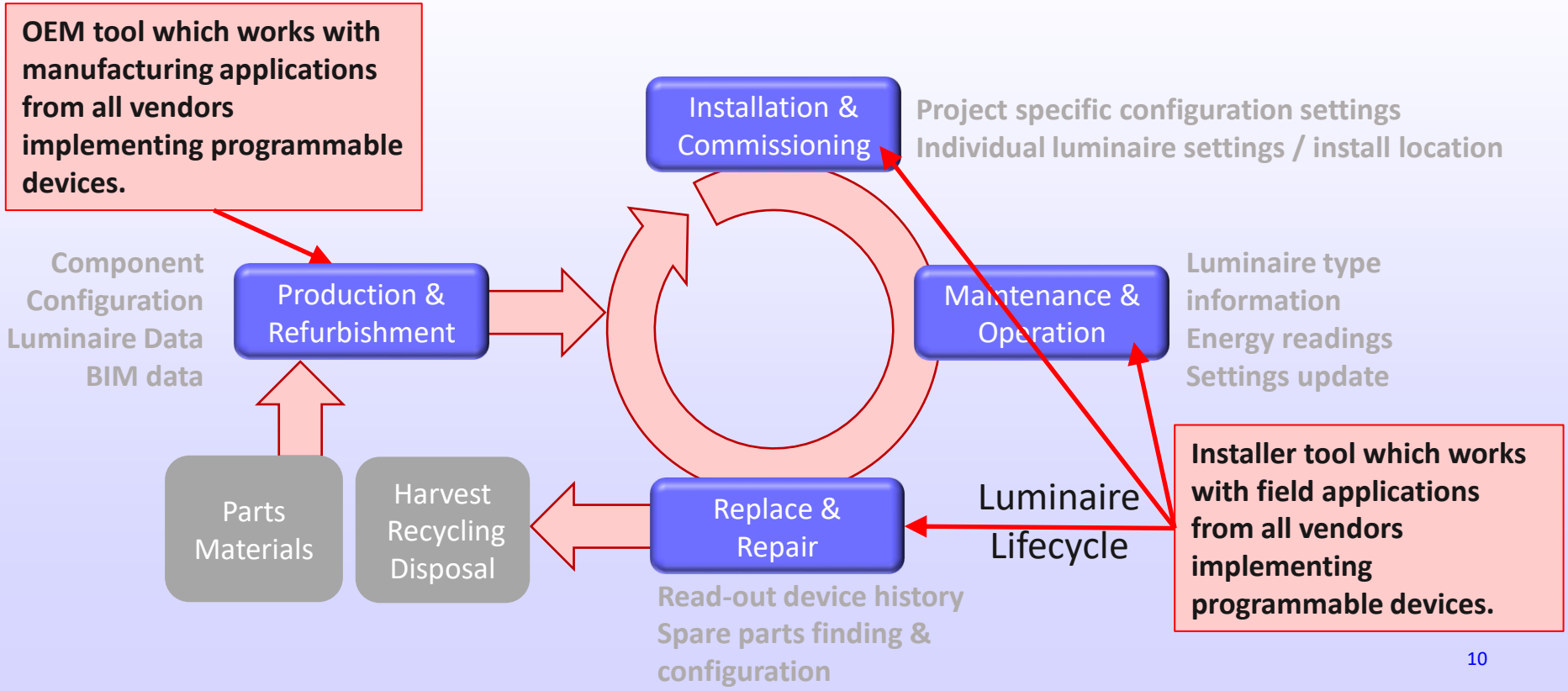
Wireless programming using ISO standardized NFC protocol

Standardized Bluetooth GATT Service

Mobile NFC reader

Smart device with vendor app enabling project specific settings

Zhaga makes data management over the luminaire lifecycle easy with tools for the OEM and installer



Benefits of Book 24 and 25 certification

- Certification builds trust in interoperability
  - Certification tests carried out by vendors and the letter of confirmation is inspected by an independent authority
  - Certified products are traceable in the publicly accessible Zhaga product databases
  - Certification logos are trademarked to prevent misuse

- Certification gives business advantages
  - Certified NFC readers available from multiple suppliers
  - Consistent NFC reader supply for luminaires with NFC programmable components
  - Certified NFC programmable components available from multiple suppliers
  - Easy to identify (trademark) if NFC reader works with vendor software written for Zhaga NFC capable components
  - Certification logos provide an established brand for product marketing

Certification of Book 24 NFC programmable devices

Organisation	Process	Comment
Device Vendor		Programmable device manufacturer uses reference NFC Reader Manufacturer conducts tests in line with test specification in Book 24. When passing manufacturer submits a self-declaration form.
Independent Test House		Zhaga test house inspects the self-declaration form
	Certified	Product Zhaga (24) certified and traceable in Zhaga product database

)* https://launchstudio.bluetooth.com/Listings/Search

Certification of Book 25 NFC readers

Organisation	Process	Comment
Bluetooth		Bluetooth SIG listing* Certification may be done without testing, if based on a qualified component (e.g. RF module) referenced in the listing.
Device Vendor		NFC Reader maker conducts tests in line with test specification in book 25. When passing it submits a self-declaration form.
ZHAGA Independent Test House		Zhaga test house inspects the self-declaration form and verifies the product is listed on the Bluetooth SIG web-site
ZHAGA	Certified	Product Zhaga (25) certified and traceable in Zhaga product database

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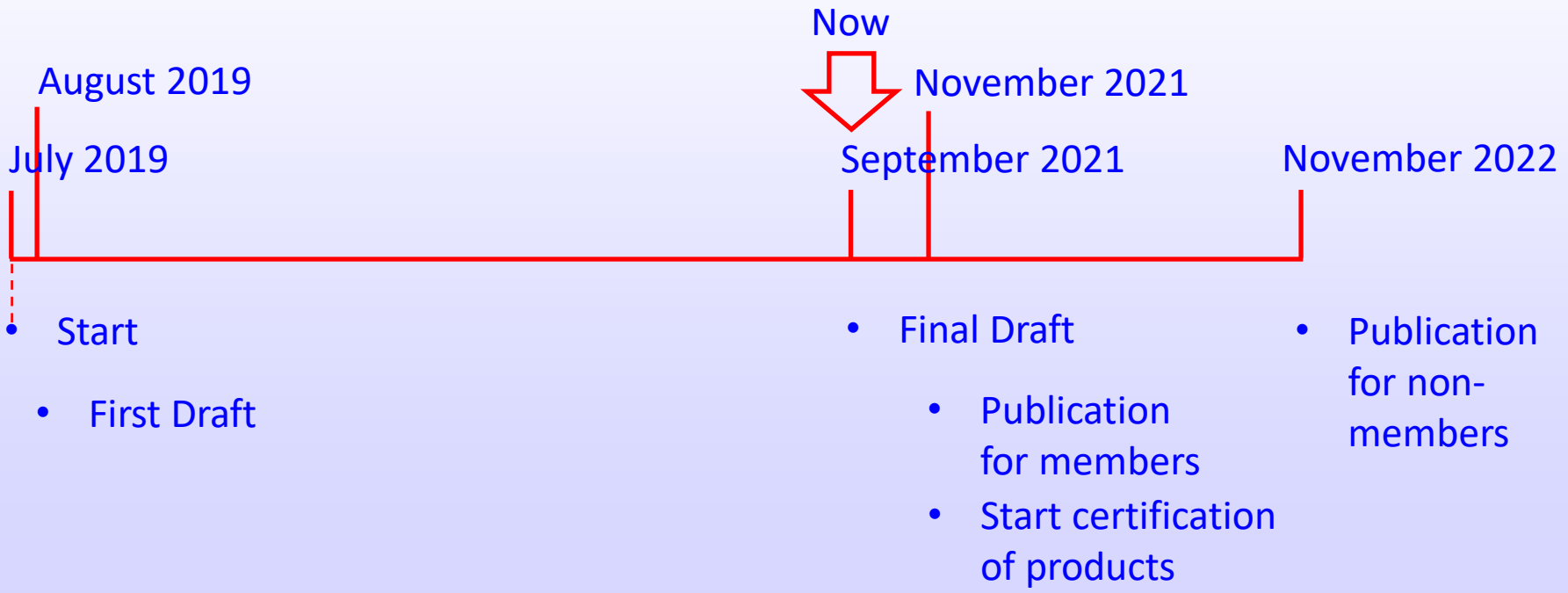
Timeline

- B24 has been published for non-members
- B25 timeline:



Conclusion

- Zhaga addressed the data management problem by interoperable maintenance tools enabling easy to service, configurable luminaires over the entire luminaire lifecycle
- Zhaga Book 24 and 25 define
  - ISO 15693 NFC communication between an NFC reader and an NFC programmable device
  - Bluetooth GATT Service for the communication between the NFC reader and the field-maintenance application on a smart device
- Zhaga testing and certification create trust in the interoperability of NFC readers and programmable devices
- The use of Zhaga certified products provides many business advantages

THANK YOU!

ZHAGA Consortium

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