



AIDC Implementation Experiences

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B | BRAUN
SHARING EXPERTISE



Four Areas of Medical Expertise.

Four Divisions orientate their products and services towards different areas of medicine:

- hospitals – Hospital Care Division
- surgery – Aesculap Division
- home care sector and general practitioners – OPM Division
- extracorporeal blood treatment – B. Braun Avitum

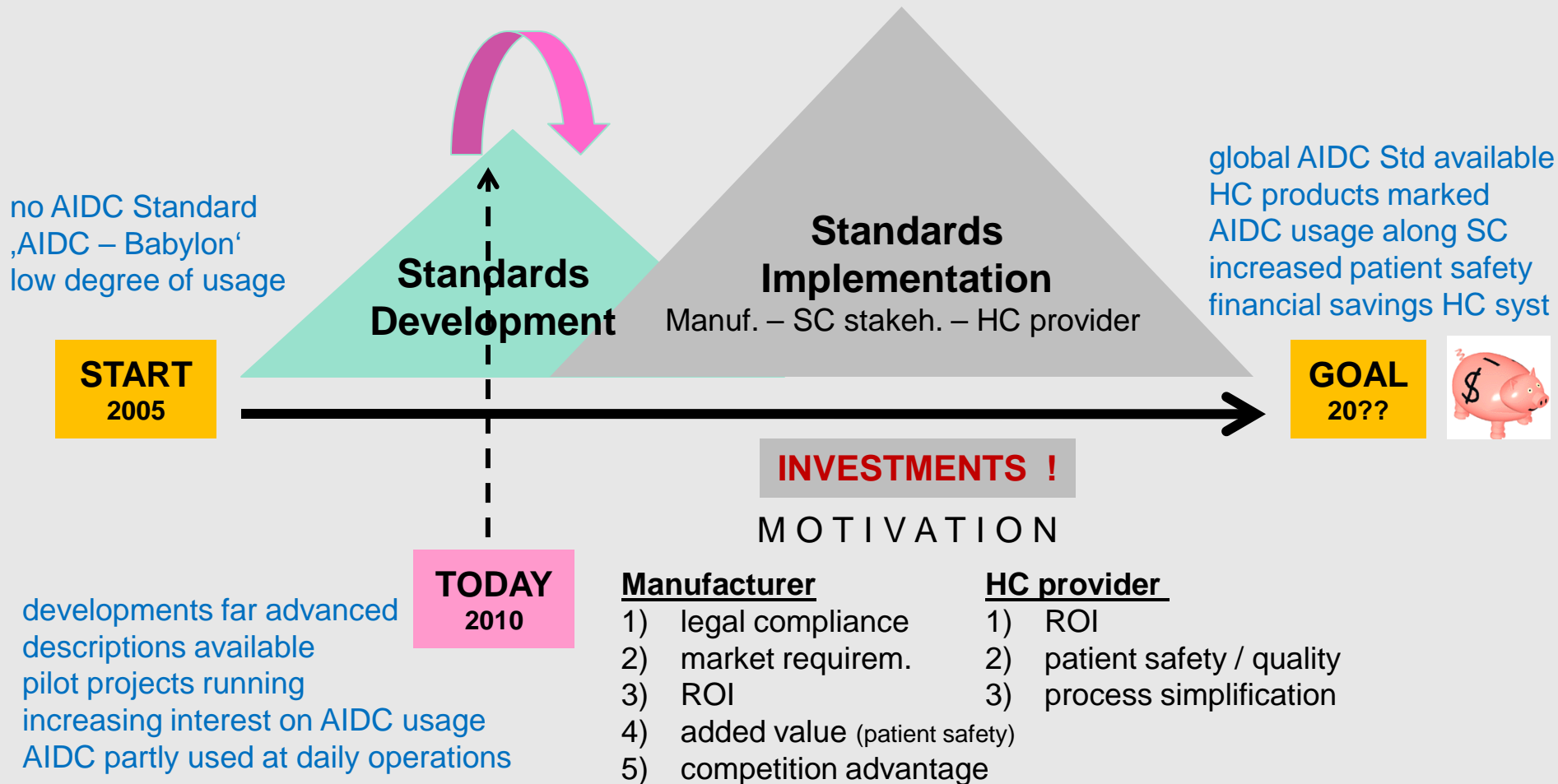
Medical Devices + Pharmaceuticals

We are there where people need us – in 50 countries across the globe (> 40.000 employees).



AIDC Standards : Where do we are today in Healthcare ?

- the long path from the development up to the implementation !

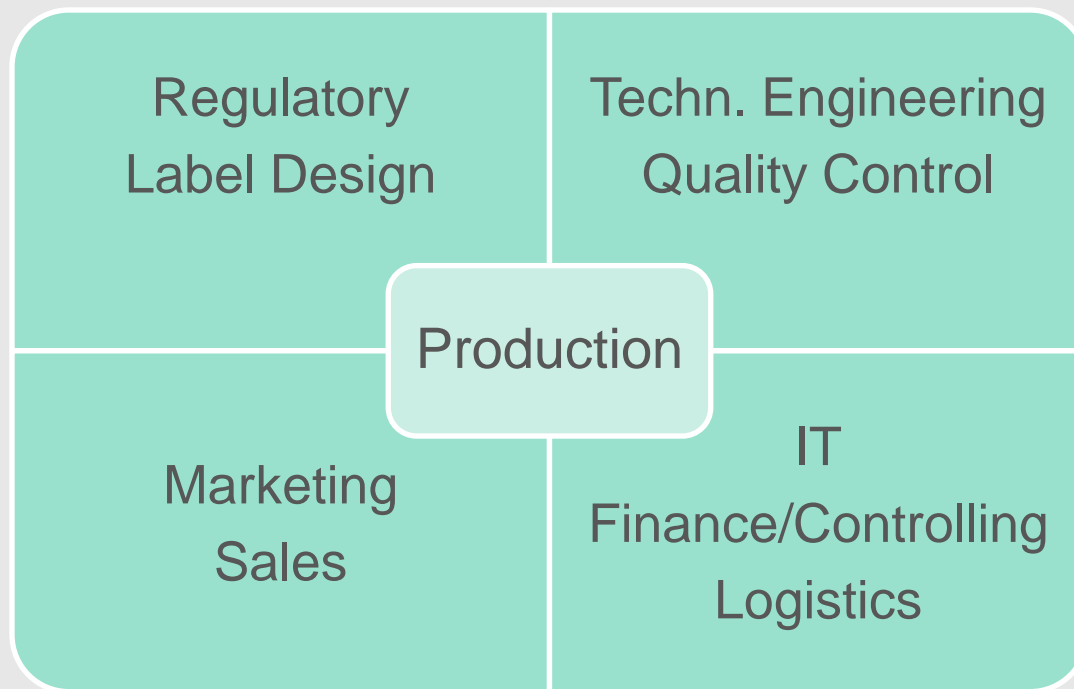


Definition of the company's AIDC strategy

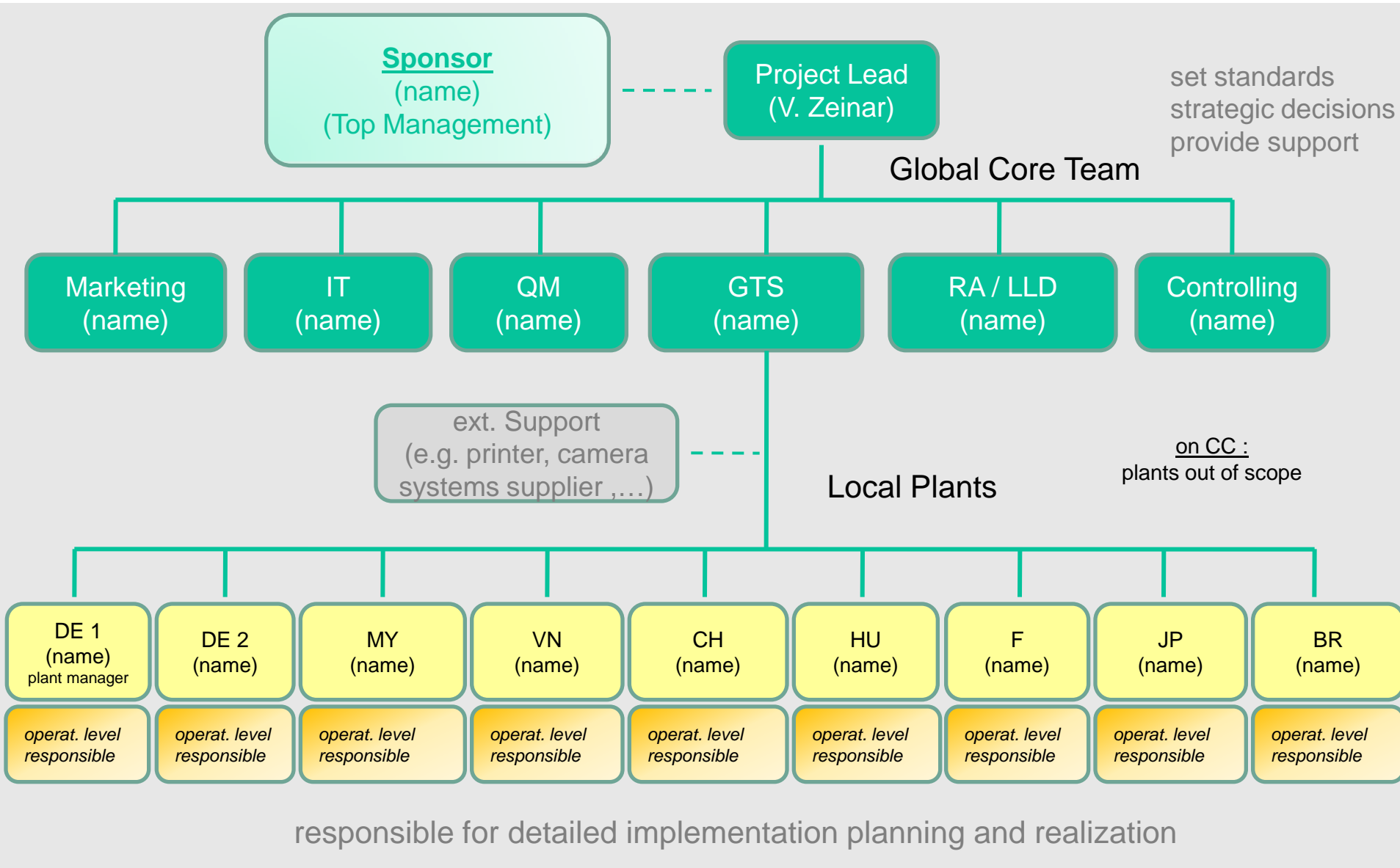
- check what's going on globally
- organize the internal information flow + responsibilities
- get a clear picture of the respective regulations, customer requirements, trends, ...
- establish a core team of experts with regard to AIDC
- become familiar with globally accepted standards
- decide which standard(s) you are going to adopt
- describe the strategic goals (short-term / medium-term / long-term)

The project team

- depending on the company's organization teams become very complex
- due to the various aspects a cross-functional required
- global + local representation

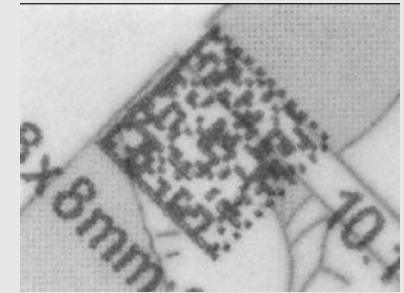


AIDC Implementation : Project Org. Chart example



Technical feasibility studies

- particularly for consumption unit pack. level (no label)



DM-Code through the camera of the verifier

technical framework

- multilingual packaging (> 20 languages)
- limited space (DM size : 6x6 - 10x10 mm)
- production/packaging line speed
- DM quality verification : ISO/IEC 15415 (final grade 1,5)
- packaging material (Tyvek, coated/uncoated paper, label, ...)
- translucent paper in use
- printing technology (inkjet, thermo transfers, etc.)
- only validated ink permitted



Time consuming learning period !

Possible problems

DM-Codes in different sizes through the camera of the verifier



Lines caused by blocked nozzles

Influences on the readability by the lines are possible!

- the smaller the DM-Code, the higher is the influence
- the higher the resolution of the DM-Code (more modules per side), the higher is the influence

➔ possible problems with 6x6mm DM-Codes carrying 22x22 modules (GTIN, expiry, lot no)

low cost hand-held scanner reads / verifier does NOT

AIDC implementation : Printing cylinder technology

- only fix data (using clichés)
- cylinder pressure adjustments influence the print quality
- continuous print quality hardly achievable

technology sufficient
for normal printing,
NOT for DM

before change of ink roll



after change of ink roll



AIDC implementation : Printing plate technology

- only fix data (using clichés)
- plate pressure varies over the entire print area
- continuous print quality hardly achievable

technology sufficient
for normal printing,
NOT for DM



AIDC implementation : Further challenges

- technical feasibility studies
 - pack. material, print technology, ink, impact on production speed, ...
- investment planning + release
- new hardware / software (for in-line printing)
- label artwork / packaging paper
 - redesign to have space for bar code
- technical engineering efforts
 - HW installation, lines 7 days/24h in use, ...
- perform test trials
- measurements to fulfill BC quality requirements
 - 100% control by camera systems vs. sample checks
 - e.g. in full-autom. pack. lines, how to handle faults, sort-out/bypass
 - define internal globally harmonized test methods
- process qualification and validation
- documentation
 - drawings, process descriptions, notified bodies, ...
- data maintenance + exchange
 - material master data (GTIN)
- ...

IMPLEMENTATION

time consuming !

complex !

costly !

AIDC implementation : General information

Packaging hierarchy

- pallet
- case
- shelf pack
- primary pack

GTIN allocation to all packaging levels in SAP material master data



AIDC implementation : Shelf pack / case



GS1 Standard

- linear bar code
- concatenated (GS1-128)
- non-concatenated (EAN/UPC + GS1-128)
- GTIN, expiry date, lot no (serial no)

Mini-Spike Micro-Tip

50

AB PM 669-44 / PM 669-163
BR Registro ANVISA N° 1.00085.30001
IN Imported by : B. Braun Medical (I) Pvt.Ltd., IL R FS, BKC, Bandra, Mumbai-51 - Manufactured by: B. Braun Medical Industries SIA, 11900 Bayan Lepas, Penang, Malaysia
MR.P: Rp 0000.00 (incl. of all taxes)
Import. Lic No: xxxx
MA Reg San: 0202C200455A

YYYY-MM
YYYY-MM
LOT BATCH
REF 4550510
STERILIT

Made in Germany

CE 0123

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34209 Melsungen
Germany
www.bbraun.com

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100 Mini-Spike Micro Tip

DE Entnahm- oder Zuspitzkanüle.
GB 1% additive dispersing pin for aspiration or injection.
FR Dispositif pour prélèvement ou injection.
ES Pinzón para aspiración o inyección.

IT Dispositivo per prelievo o addizione.
PT Dispositivo para aspiração ou injeção.
SE Dispersingspikar för uppdragning och dispenserering.
PL Aplikator do wstrzykiwania i pobierania leków.

REF 4550510
LOT
STERILIT

100 x PZN 2157964

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GS1-128
(GTIN, expiry date, lot no)

EAN/UPC
(GTIN)

+ GS1-128
(expiry date + lot no)

AIDC implementation : Primary pack

- GS1 DataMatrix
- GTIN, expiry, lot no
- ongoing



GTIN human-readable wherever possible



AIDC implementation : Product (DPM)

DPM = Direct Part Marking

2.5 x 2.5 mm
laser etched

currently

- product ID + SN
- no GS1 standard

future

- sGTIN
- GS1 Standard



Top-management support !

convince people on a very high management level, that helps :

- to approve/release the investments
- to speed up the schedule
- to resolve escalated issues (e.g. Production vs. Marketing)

One can also reach big aims in small steps !

- believe in global standards
 - pre-requisite : to be familiar with global standards (matter of course)
- understand your business partner needs
- start implementation now,
 - do not wait for ever until the 100% perfect solution is available
- implement stepwise
- benefit from experiences / best practice use cases
- keep engaged or become engaged in GS1 Healthcare (global/local)
- share your expertise

Start to move from the vision to the reality !

Thank you very much for your attention !

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