

# CGM Investor & Analyst Conference 2015

**G3 - a unified AIS platform for all CGM markets**

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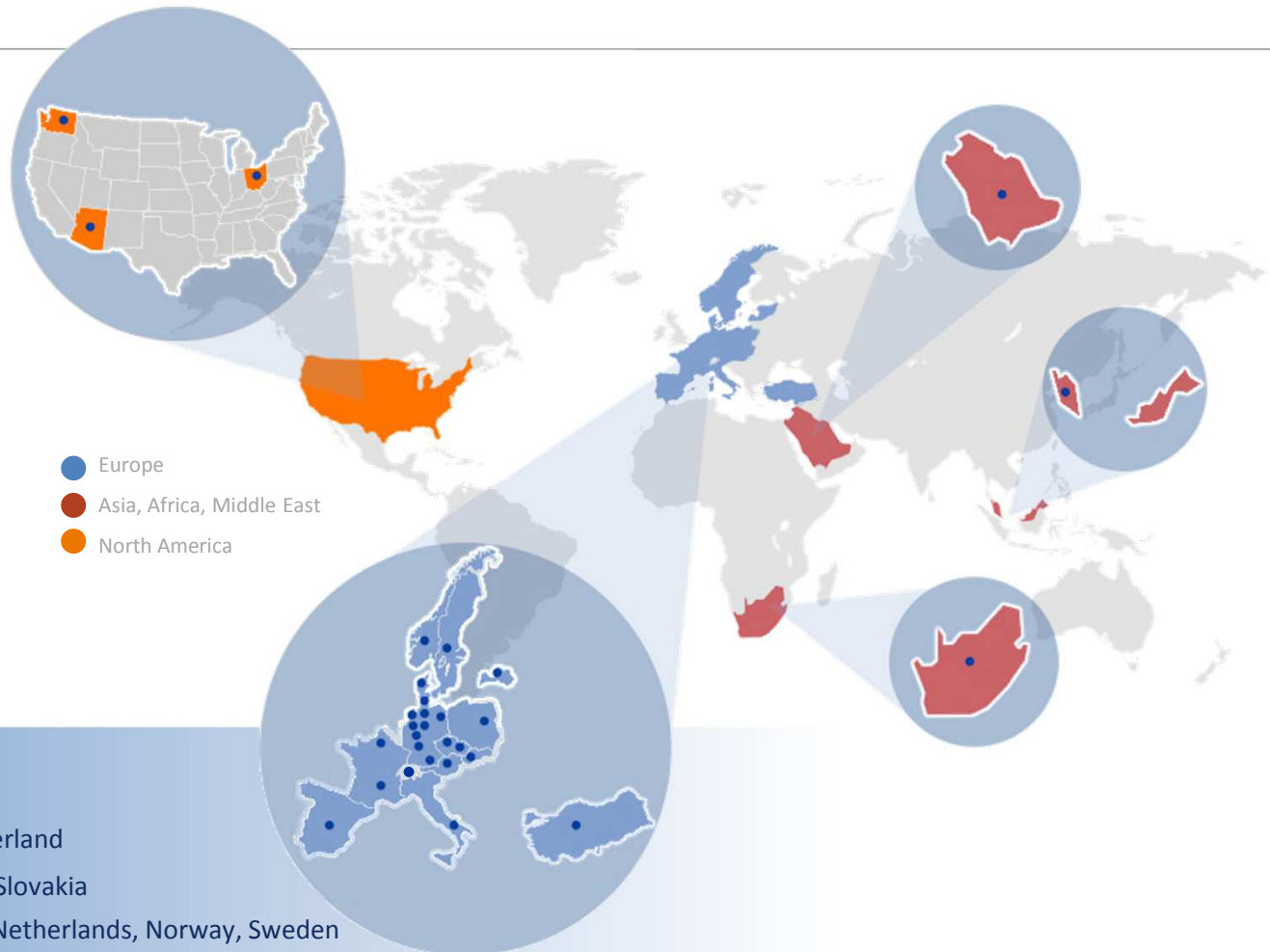
**9<sup>th</sup> October, 2015**

**Innovationsforum, Koblenz**



# CGM geographic diversification

- Offices in 19 countries across four continents
- Well established in Europe with growing presence in US, Asia, Africa
- Internationally transferable business model with similar industry drivers worldwide

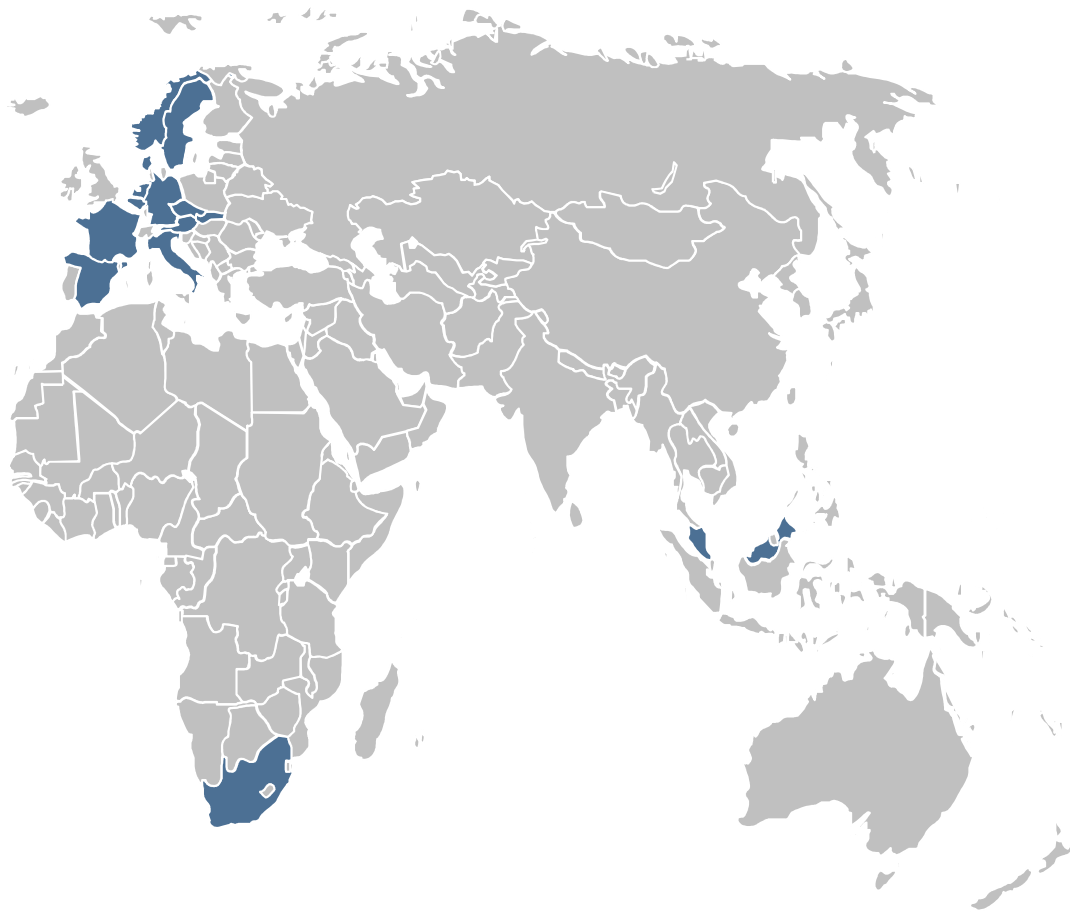


## Global Offices

Central Europe	Germany, Austria, Switzerland
Central Eastern Europe	Czech Republic, Poland, Slovakia
Northern Europe	Belgium, Denmark, The Netherlands, Norway, Sweden
Southern Europe	France, Italy, Spain
Asia, Africa, Middle East	Malaysia, Saudi Arabia, South Africa, Turkey
North America	United States

# Current situation – Software for doctors (AIS)

- CGM has a large portfolio of market-leading software products for doctors (AIS products)
- Most of those products we got by acquisition
- All current AIS products in the group are national products for national markets developed and maintained by national CGM organizations



# AIS product overview

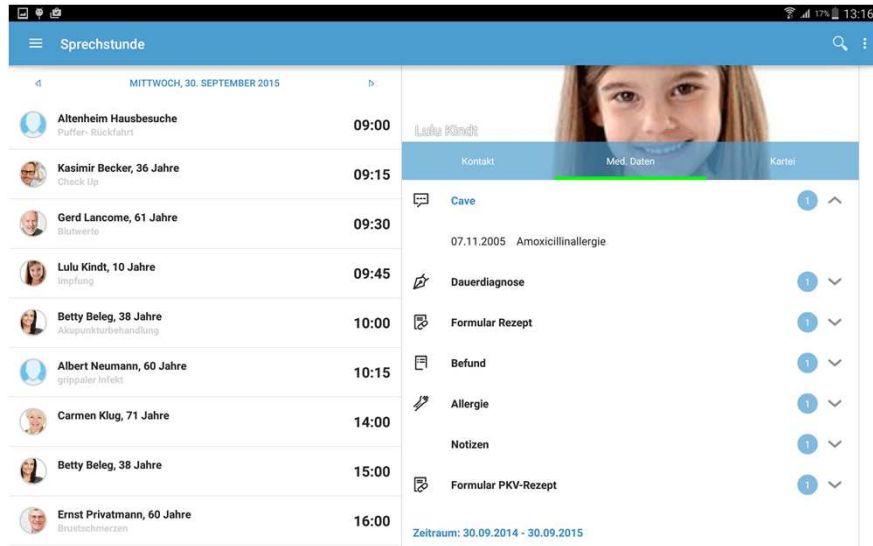
<b>Country</b>	<b>Main AIS Products</b>	<b>Providers</b>
Austria	Innomed, pcPO, medXpert	6,100
Belgium	Windoc, Oxygen, OxyBoxy	9,000
Denmark	XMO, XDONT	2,700
France	AxiSanté, Hellodoc	37,500
Germany	Medistar, Turbomed, Albis, M1, DataVital, Z1	87,000
Italy	Profim, FPF, Infantia, XDent	21,000
Malaysia	PMO	900
Netherlands	Mira, CGM Huisarts	2,700
Norway	Journal, Vision, Winmed	4,200
Slovakia	Win Adam	1,800
Sweden	TakeCare, Journal 4, Journal 3, PMO, Vision	10,000
South Africa	PMO	4,100
Czech Rep.	Adam, PC Doktor, Amicus, Medicus	17,500
USA	webPractice, webEHR, Clinical, Enterprise	12,500

# Consolidation and synergy activities to date

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- Strategies to consolidate, optimize and extend the legacy AIS products have been executed for many years
- Consolidation of products on national level, e. g.:
  - Germany: Chremasoft, Zahnartzrechner
  - Denmark: Darwin, Medicare, Aeskulap
  - USA: TMO, VO, Dream, PCN, Mends
  - Austria: Choice, medical net
- Central CGM products and add-ons are used by multiple AIS products (CGM platform products)
- Examples
  - CGM LIFE eSERVICES, CGM Connect, CGM Timer
  - Certified drug prescribing database for Germany, used in all German AIS products
  - Electronic archive (CGM Documents, CGM Praxisarchiv)

# Example CGM M1 Pro Mobile Apps



- Support doctors and nurses for patient home visits.
- Secure, real-time access to patient data in the practice management.
- Mobile support for clinical documentation.
- Complements existing AIS products.
- Usable with various German AIS products.

# Parallel activity: Global convergence

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- **HIS** products are converging towards G3 Clinical Information System
- **AIS** is the next stage to converge.  
Use global synergies in major AIS-parts:
  - Patient management
  - Scheduling
  - Documentation
  - Prescription
  - Billing, ...



# Challenging proposition for a global AIS product

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- Different healthcare systems in various countries with national regulations have strong influence to product requirements, like
  - Different coding systems
  - Different core processes (e. g. documentation, medication)
  - Financial/Billing
  - Integration in national e-health infrastructures



# National differences in AIS products (excerpt)

Area	National differences
Demographics	Patient identification
Catalogs	Different (flavors) of catalogs like ICD-10, Drug database, ...
Documentation	Different way how clinical documentation is approached. E. g. - Billing-oriented documentation in Germany - SOAP note (Subjective, Objective, Assessment, Procedure) in US
Medication	Impact by national Law which have high influence on medication process (e.g. AVWG in Germany).
Billing	Highly dependent on national payer structures.
(E-health) integration	Highly dependent on national (e-Health) Infrastructures.
Forms	National dependent. In Germany we have > 150 standard forms to support, some with a dedicated workflows behind.

# Global market trends (excerpt)

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- Integrated care networks; boundaries between primary and secondary care become blurred (e. g. in Scandinavia)
- Government driven digitalization and central healthcare (communication) infrastructures (e. g. German Telematik Infrastructure, P1 project in Poland, Digital Dialog in Norway)
- Increasing communication and terminology standardization (e. g. HL7 FIHR, CDA, SNOMED)
- Consolidation of providers and increasing size of group practices
- Patient engagement – increased importance of patient satisfaction and patient flow
- Demand for secure Cloud- and SaaS solutions
- New players drive innovation, e. g. IBM with Watson with AI to support doctors, CareCloud and Salesforce/Phillips to better manage patient relations

# CGM's strategic solution



## Large organizations

Regions, integrated care organizations, hospitals, polyclinics, care homes, etc.



## Small offices

GPs, specialists, physiotherapists, school healthcare, pharmacies, etc.

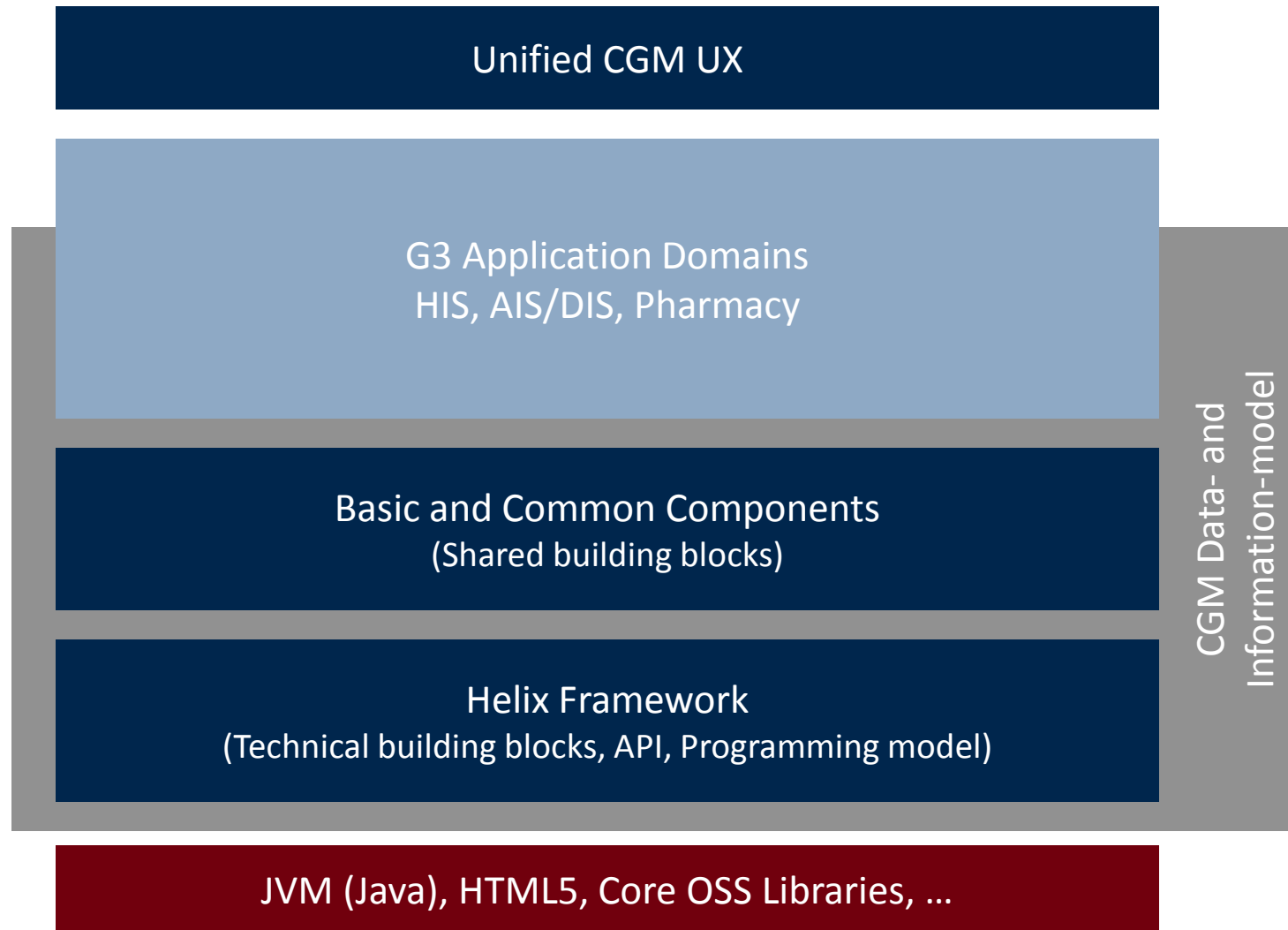


# G3 architecture and technology at a glance

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- Multi-tier, Service-oriented architecture with defined API's accessible with standard protocols and data formats.
- Cloud- and On-Premise system operation
- Web-based and native user interfaces
- Wide support of standard runtime infrastructures like operation systems, App/Web Containers or DBMS
- Utilizes state-of-the-art and de-facto standard open source components
- One data model for patient data (HIS, AIS, PCS and other)
- One defined technology stack for all tiers
- Common Components shared across several product types and applications
- Deep integration capabilities into non G3 applications

# G3 model



# G3 technology map

	JAVA server side	HTML5 client
Runtime Environment	JVM	HTML5
Runtime Container	Application Server (JBoss, Apache, Jetty)	Browser
Database	“Agnostic” (MS SQL, Oracle, Postgres, MySQL, H2)	
Preferred Language	Java	JavaScript
Main frameworks and technology components	Spring Hibernate HornetQ (encapsulated by Helix)	AngularJS
Communication	Agnostic	HTTP / JSON WebSockets
Testing Frameworks	TestNG (Unit tests) JMeter (Performance tests) Helix Testing Support	Jasmine Angular Scenario Protractor
Dependency management	Maven	bower
Build management	Maven	grunt

# G3 user experience: HIS Duty Roster

Dienstplan Wunschplan Menüpunkt 3

Show History Problemauswertung Kopieren Einfügen

Vergabemodus

Ward Surgery 1

Monat

Woche

Dienstplan

Planungstafel

OKTOBER 2014		KW 40					KW 41					KW 42					KW 43					KW 44												
Alle (25)	Ärzte (10)	Pflege (15)	MI 01	DO 02	FR 03	SA 04	SO 05	MO 06	DI 07	MI 08	DO 09	FR 10	SA 11	SO 12	MO 13	DI 14	MI 15	DO 16	FR 17	SA 18	SO 19	MO 20	DI 21	MI 22	DO 23	FR 24	SA 25	SO 26	MO 27	DI 28	MI 29	DO 30	FR 31	
<b>Chirurgen</b>																																		
Becker, Christopher	164 h		N NS	N NS						T TS	T TS												S SP	S SP		T TS					T TS			
Fischer, Hannelore	176 h															T BRD											S SP	S SP	S SP	S SP				
Hartmann, Elisabeth Magdalena	150 h		T BRD	T BRD	N NS	N NS	N NS	T TS	T TS	T TS		N NS											T TS			T BRD	T BRD		T BRD	T BRD	T BRD	N NS		
Hofmann, Michael Jens	178 h	+2									N NS												N NS	T TS			N NS			N NS	N NS	N NS		
<b>Assistenzärzte</b>																																		
Meyer, Armin Franz	164 h	→	N NS						N NS								S SP	S SP	S SP	T TS											N BRD			
Neumann, Oliver Dirk	198 h	+12			N NS							N NS	N NS																					
Schmidt, Klara	60 h								T TS	T TS	T TS	T TS	T TS													S SP	S SP	S SP						
Schmiedinger, Karoline	30 h		T BRD	T BRD	T BRD	N NS	N NS	N NS																										
Kohl, Katharina Maria	10 h																																	

## NS NACHTDIENST

Standardzeit: 07:00 - 14:00  
 Bereits eingeplant: 61  
 Noch zu verplanen: 79

Becker, Christopher  
 03.10.14 | 04.10.14

Hartmann, Elisabeth Magdalena  
 04.10.14 | 05.10.14 | 06.10.14

Hofmann, Michael Jens  
 21.10.14 | 28.10.14 | 29.10.14 | 30.10.14

Meyer, Armin Franz  
 01.10.14 | 07.10.14

Neumann, Oliver Dirk  
 01.10.14 | 11.10.14

Schmiedinger, Karoline  
 06.10.14 | 07.10.14 | 08.10.14

Schmitt, Paul  
 13.10.14 | 14.10.14

Tanner, Elias Patrick  
 14.10.14 | 15.10.14 | 16.10.14

Thicker, Manuel  
 22.10.14

Thonbauer, Richard  
 10.10.14 | 12.10.14 | 26.10.14

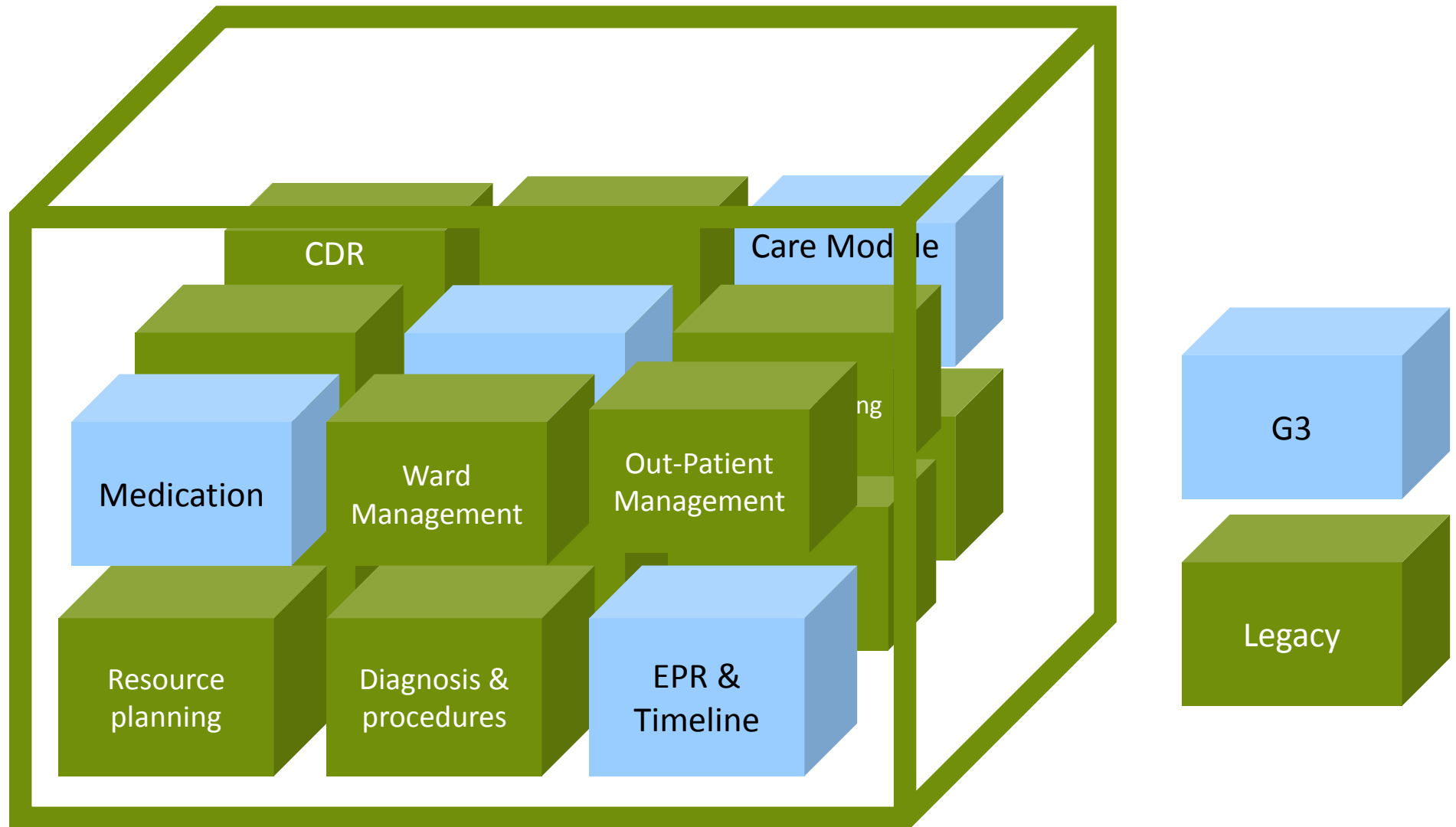
Vorcher, Elina

### BENÖTIGTE RESSOURCEN

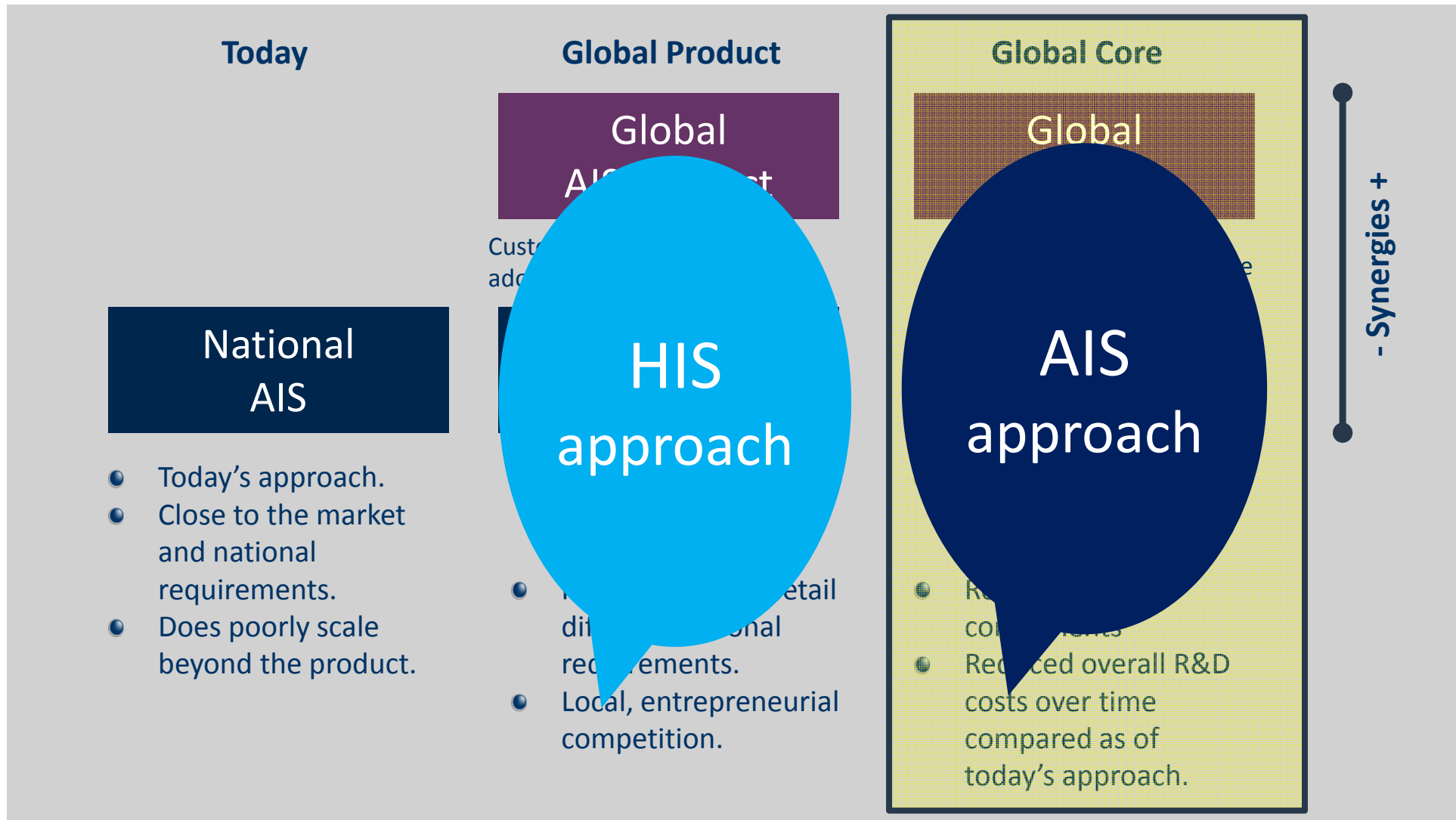
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NS Nachtdienst	2	3	4	3	4	2	1	3				3	4	5	2	3	5	4	5	2	3	2	1	3	5	4	2	1	3
BRD Bereitschaftsdienst Tag	1	2	4	4	1	2	2	2	3	1	2	4	2	1		2	5	3	2	3	2	3	1	4	4	2	4	1	
SP Spätdienst	2	1	1	2	3	2	1	3	2	1	1	2	2	2		1	6	1	2	3	2	1	3	3	4	2	1	1	



# G3 – modular migration capability for HIS



# Different approach to address the AIS challenge

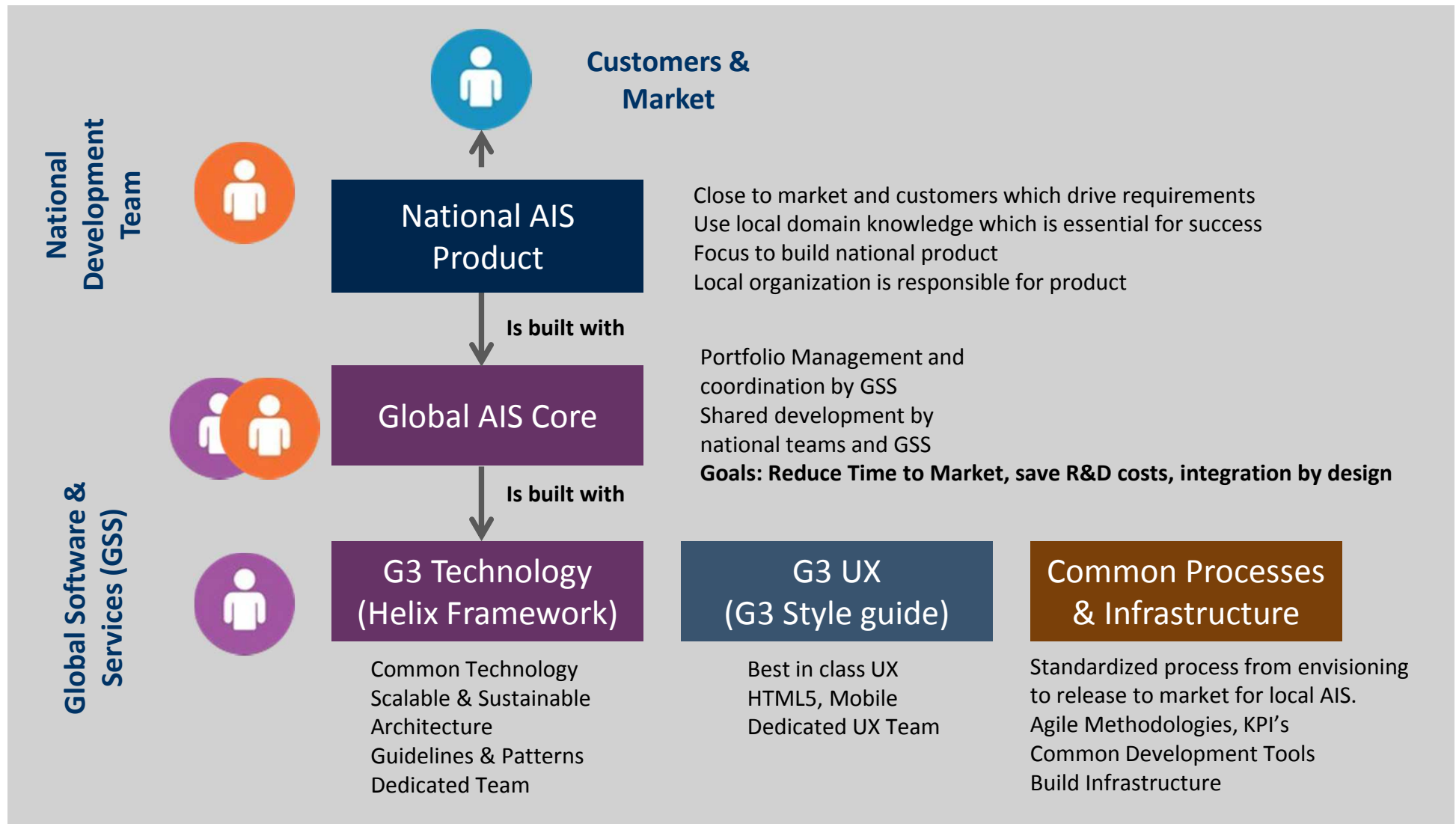


# Global AIS Core as basis for all new national AIS products

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- Global AIS Core provides a set of components to speed up time-to market for new national AIS products.
- Total cost savings up to 60% compared to built-from-scratch approach.
- Based on same G3 technology and framework as for HIS.
- Same unified User Experience based on G3 style guide and G3 HTML5-based UI framework.
- Based on the same unified, patient-centric core data model.
- Pre-fabricated core components for a national AIS (Demographics, Documentation, Administration, ...)
- Seamless CGM LIFE eService integration.
- Support of different healthcare systems (e. g. Scandics, Germany).

# Global AIS Core Development Model



# One platform – many products

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- Automotive analogy: Automotive industry is using same platforms and engines to build cars more efficiently.
- Industrial trend goes towards using re-usable components instead of hand-crafting each software from scratch.
- Product orchestration: products based on components are orchestrated out of a set of components and additional features are added by product specific components are just source coding in software industry.

# Current and planned G3 AIS activities

Country	Main AIS Products
Austria	Started
Belgium	Planned
Denmark	Started
France	Started
Germany	Started
Italy	Planned
Malaysia	Planned
Netherlands	Mira, CGM Huisarts
Norway	Journal, Vision, Winmed
Slovakia	Started
Sweden	TakeCare, Journal 4, Journal 3, PMO, Vision
South Africa	PMO
Czech Rep.	Started
USA	webPractice, webEHR, Clinical, Enterprise

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- Similar sequence as in Germany
    - New private
    - New statutory
    - Migration
  - Earliest beginning of legacy product migration 2018

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# ALBIS G3

## Case Example



# “Old” ALBIS for Windows

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- ALBIS for Windows on the market since 1994
- First AIS for Windows-PC in Germany
- Currently 6,500 practices with 12,200 general practitioners
- 21 regional sales and service partners serve the customers and acquire new customers
- Part of the eGK online rollout (gematik project)

# ALBIS G3

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- ALBIS G3 will be a new and better ALBIS
    - With G3 technology
    - Running on different devices (tablets, etc.)
    - Deployed on premise or hosted
    - Using and producing Core Components alongside the Global AIS Core project
  - ALBIS G3 will retain many of the unique workflows and user experience of the existing ALBIS
  - ALBIS G3 will be foundation of future AIS development in all German-speaking markets
- Demo

# Timeline ALBIS G3 for Germany

Step	2012 - 2015	2016	2017	2018
<b>ALBIS G3 for private insured patients</b>	Development First pilot	More pilots		
<b>ALBIS G3 for statutory health insurance</b>		Development	Development First new customers	
<b>ALBIS G3 for migration</b>				Development First ALBIS migration

# Thank you for your attention!

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