



“COCKPIT”

Visualization of KPI's of the Austrian penal system

Outline

Visualization of KPIs of the Austrian Penal System



- > Short Overview of Austrian Penal System
 - key IT applications
 - Data warehousing
- > Indicator based controlling in Austria
 - History
 - Current status
- > Live Demo Cockpit
- > Outlook

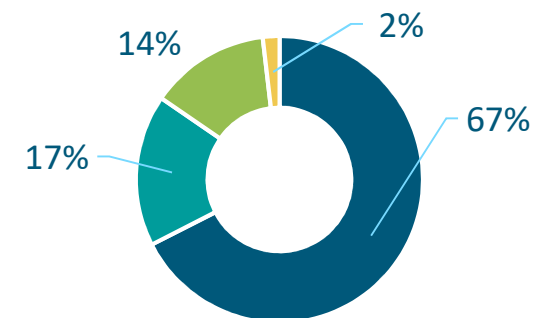
Austrian Penal System Overview

- > Political responsibility for the Penal System in Austria is vested in the Ministry for Justice. The Austrian Prison Service is organized within the Ministry of Justice. It is headed by a Director General supported by four departments.
- > The Austrian Prison Service within the Ministry of Justice is administered centrally and located in Vienna, Austria.
- > There are 27 institutions in the Austrian Prison System: 15 for pre-trial detainees, 8 for convicted detainees and 4 for mentally disturbed offenders and offenders of weaning treatment.



Composition of approx. 8.500 inmates (1.8.2020)

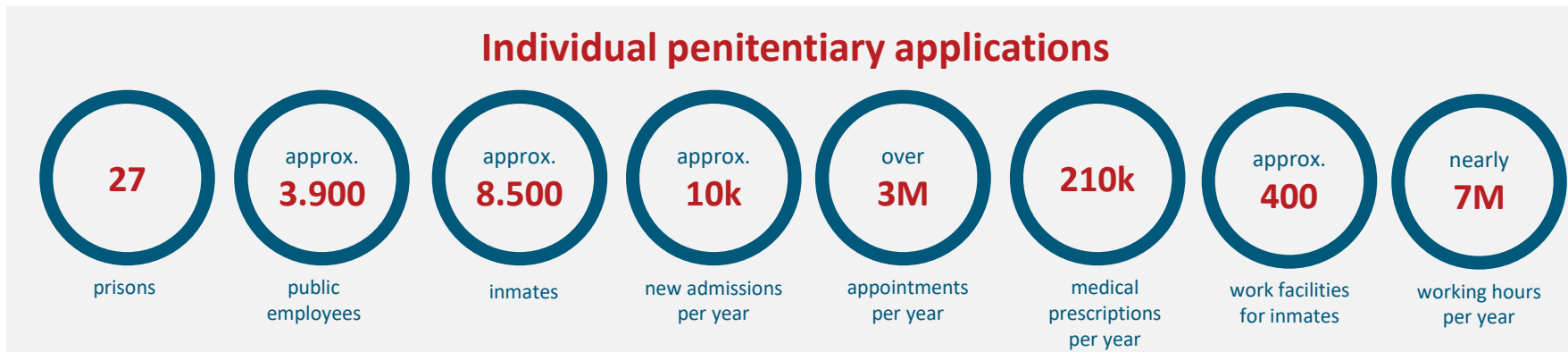
■ convicted ■ pre-trial ■ commitment order ■ others



Further insights will be given „live“ in the cockpit



Applications developed for Austrian Penal System



Integrated prison administration - IVV 2000 - present



User / Organisation

- > Ministry of Justice/Prison
 - Prison guards
 - Gate guards
 - Enforcement employees
 - Enforcement executives
 - Operations executives
 - Business executives
 - Administrative staff
 - Social workers
 - Psychologists
 - Medical professionals
- > Judges
- > Public prosecutors
- > BM.I
 - Criminal police
 - Immigration police



personal data



admission



enforcement



classification



enforcement plan



deposition



appointments



management



pardon



work remuneration



inmates funds



detention room administration



social service



psychology



medicine



reports

Interfaces

- > Biometric system
- > Intercom
- > Inmates phone connection
- > IVV
- > Electr. ankle bracelet system
- > Kiosk system
- > Data Warehouse
- > SV Delivery service (iERV)

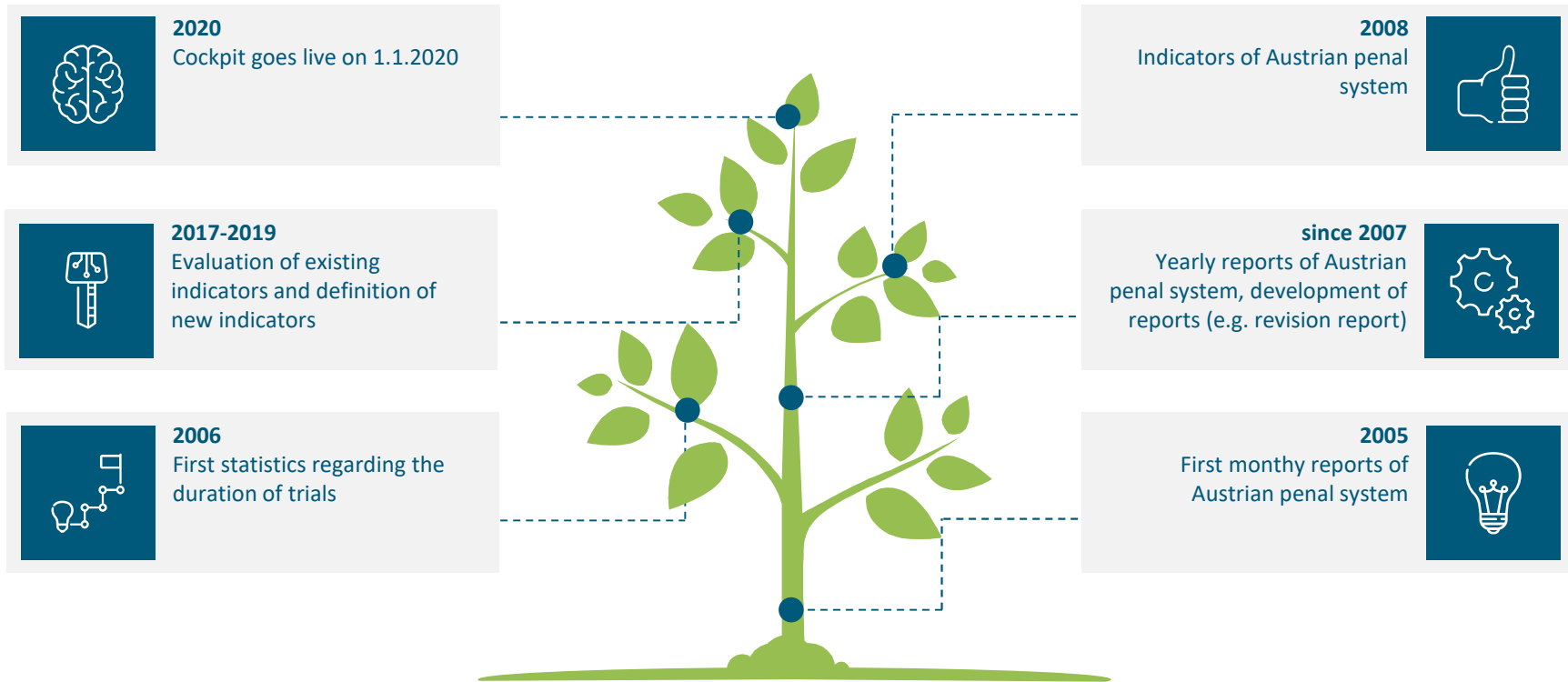
Administration

- > IT-Operator
- > IT-Administration
- > BMJ/GD

Service/Operations

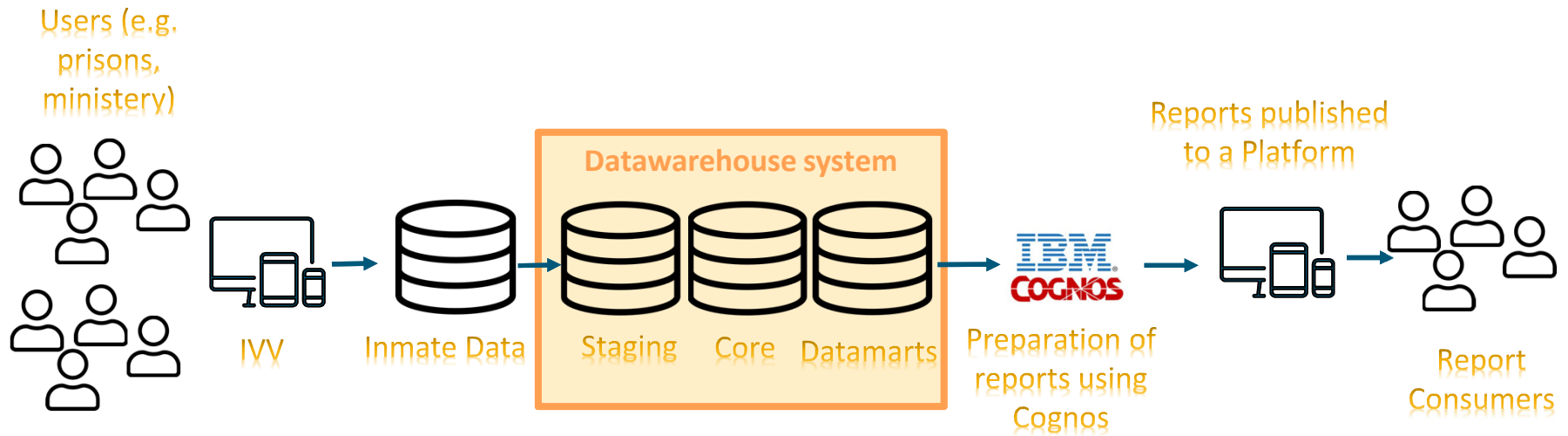
- > BRZ

Judiciary Data Warehouse and BI History

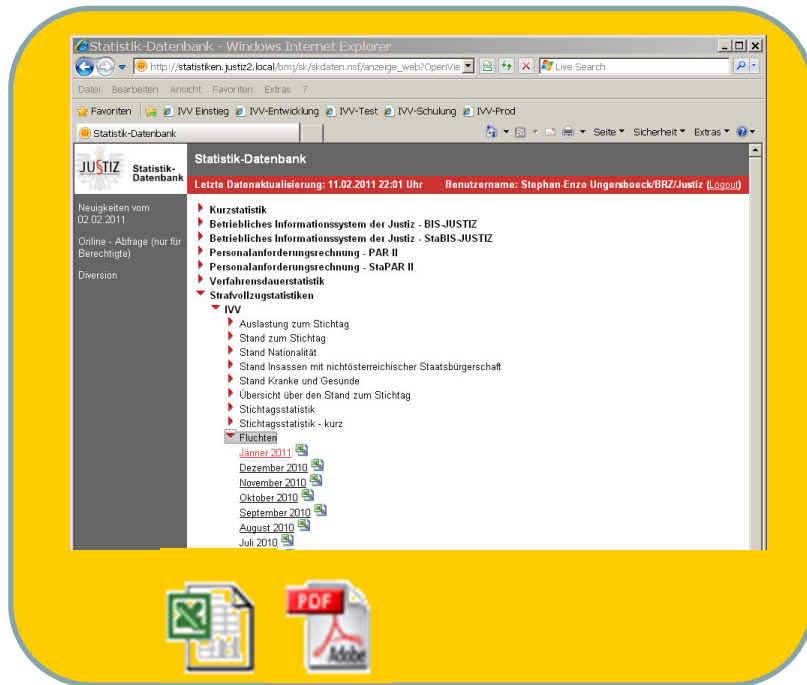


Judiciary Data Warehouse and BI

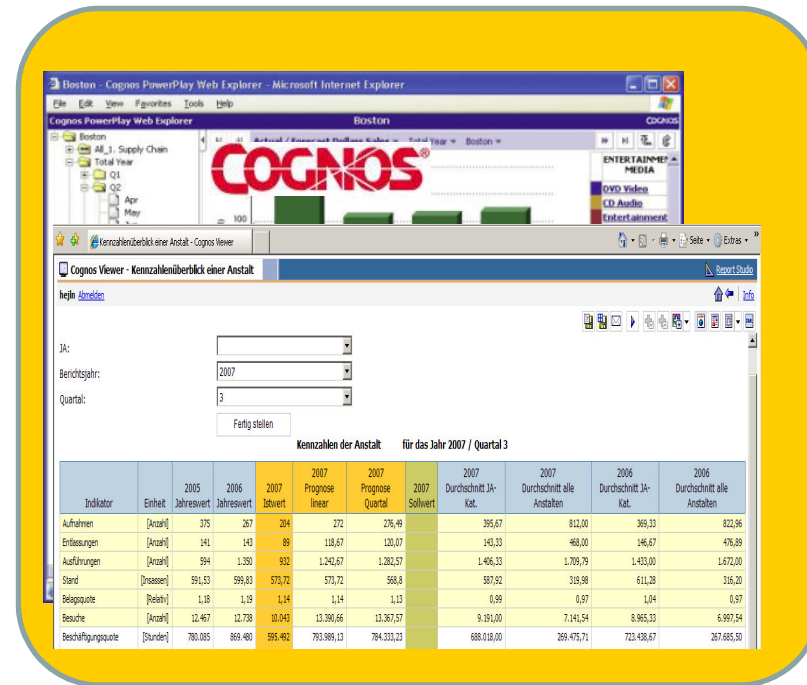
Original data flow



Automated reports of Austrian penal system



Several paginated reports are published on a monthly basis and are being made available in the intranet to a broader community



Helpdesk has access to set of special reports to answer questions regarding statistics of the penal system (e.g. for ministry of justice, parliament, EU, science,..)

BRZ

Indicator based controlling of Austrian Penal System

History of indicator based controlling

BI dates back to 2008



- > First implementation as an instrument for controlling
- > Definition of 16 indicators from the integrated prison administration tool „IVV“
 - Primarily focus on movement of inmates
 - Made available in four reports online through Cognos platform
 - Three separate reports for inmates under commitment order
 - Restricted access to these reports
- > Reports are since then in use for yearly target achievement control meetings between prisons and the general department in the ministry

History of indicator based controlling

BI dates back to 2008



> Disadvantages

- Lack of important data
 - hence important indicators were missing
- no charts, only tables
- bad usability, little interactivity
- system hard to maintain and to extend
- little insight in trends



Benchmark JAHRES-ZEITREIHE (für JA)

Indikator: Ausprägung:

Subindikator:

[Alles auswählen](#) [Auswahl für alles aufheben](#)

Berichtsjahre:

Relativwerte beziehen sich auf Hafttage

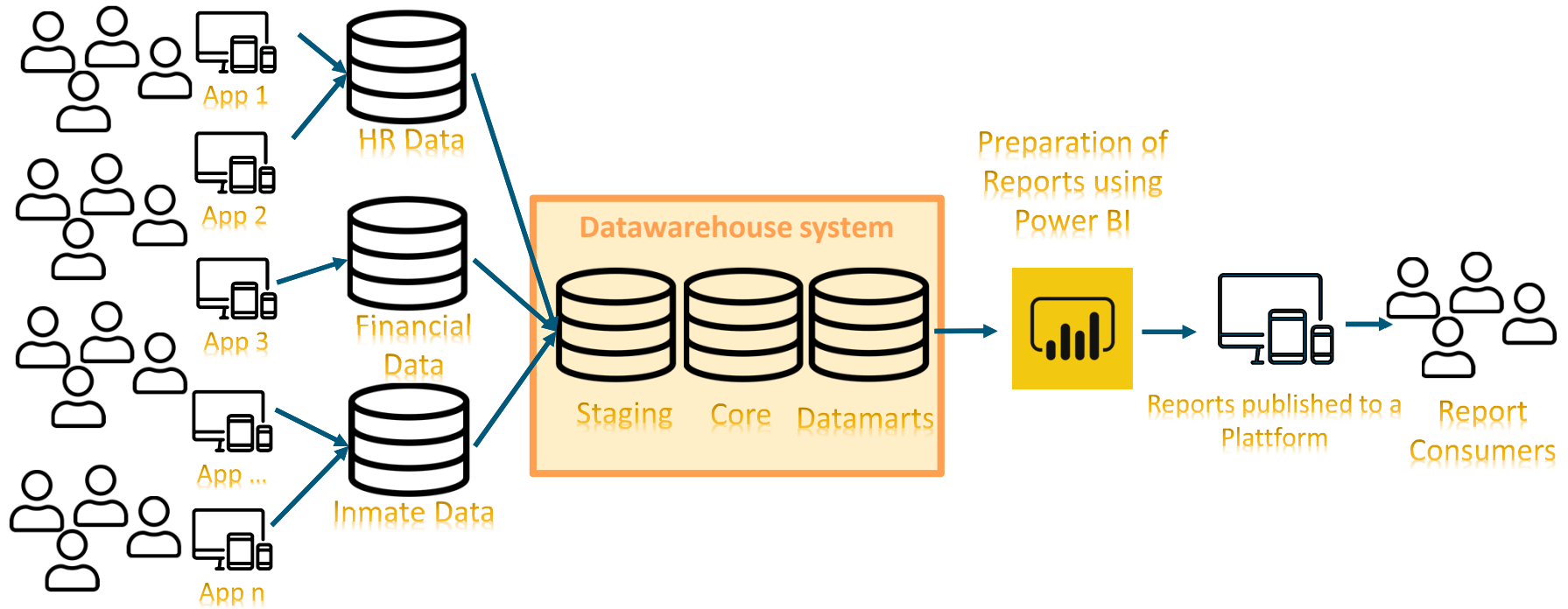
			2017	2018	2019
ALLE	ALLE_Durchschnitt	Überstellungen	1,34	1,43	1,33
GG	INN	Überstellungen	1,01	0,63	0,69
	JAK	Überstellungen	0,54	0,56	0,65
	KLA	Überstellungen	1,79	1,38	1,16
	LIN	Überstellungen	0,75	0,55	0,77
	GG_Durchschnitt	Überstellungen	0,95	0,73	0,79
GK	EIS	Überstellungen	1,42	2,19	2,37
	FDK	Überstellungen	0,44	0,54	0,47
	KRD	Überstellungen	4,17	4,78	3,58
	RIE	Überstellungen	3,77	2,69	3,16
	WEL	Überstellungen	1,34	1,46	1,56
	GK_Durchschnitt	Überstellungen	2,04	2,26	2,16

Revision of controlling mechanisms 2017 - ongoing



- > Ongoing project driven by core team consisting of decision makers in the ministry, the helpdesk and technicians from BRZ
 - Meetings on a regular basis
- > Results, e.g.
 - Definition of new indicators based on a broader set of data
 - Evaluation of new BI Tools
 - Establishment of interfaces to several applications (HR-data, financial data, ...)
 - Mentoring of decision makers in the prisons on the importance of controlling
 - „Cockpit“ Training courses
 - Go-Live on 1.1.2020
- > Continuous Development of new indicators and report pages

Data flow for new cockpit



Cockpit Data

Stored in big model

- > More than hundred different fact- and dimension tables allow for deep insight into data
 - Several millions rows of data
 - Allow for filtering of data in several ways, e.g. for inmates
 - age, sex, nationality, detention-type...

fact table



Datum	DimJA_SID	DimStandJA_SID	DimPlatzStelle_SID	DimAltersgruppe_SID	DimGeschlecht_SID	DimHaftstatus_SID	DimVollzugsstatus_SID	DimNationalitaet_SID	DimAufnahmenart_SID	ANZAHL
Samstag, 7. Januar 2017	30	30	30	3	1	7	-1	1	1	1
Mittwoch, 11. Januar 2017	30	30	30	3	1	7	-1	1	1	1
Sonntag, 12. Februar 2017	30	30	30	3	1	7	-1	1	1	1
Samstag, 25. Februar 2017	30	30	30	3	1	7	-1	1	1	1
Montag, 13. März 2017	30	30	30	3	1	7	-1	1	1	1
Mittwoch, 15. März 2017	30	30	30	3	1	7	-1	1	1	1
Donnerstag, 30. März 2017	30	30	30	3	1	7	-1	1	1	1
Samstag, 1. April 2017	30	30	30	3	1	7	-1	1	1	1

BRZ

Live Demo

Outlook for 2021

Work in progress



- > There is still a lot of work ahead of us, e.g.
 - Definition of yearly targets in the data model for 2021
 - Development of reports to easily control the target achievements
 - Mobile reports
 - Self service BI
 - Providing key users with interfaces to work with underlying data e.g. directly in excel

Thank you for your attention



> **Dr. Stephan-Enzo Ungersböck**
Product Manager
Stephan-enzo.ungersboeck@brz.gv.at

-  @brz_gmbh
-  @Bundesrechenzentrum
-  @Bundesrechenzentrum
-  @Bundesrechenzentrum
-  @Bundesrechenzentrum

