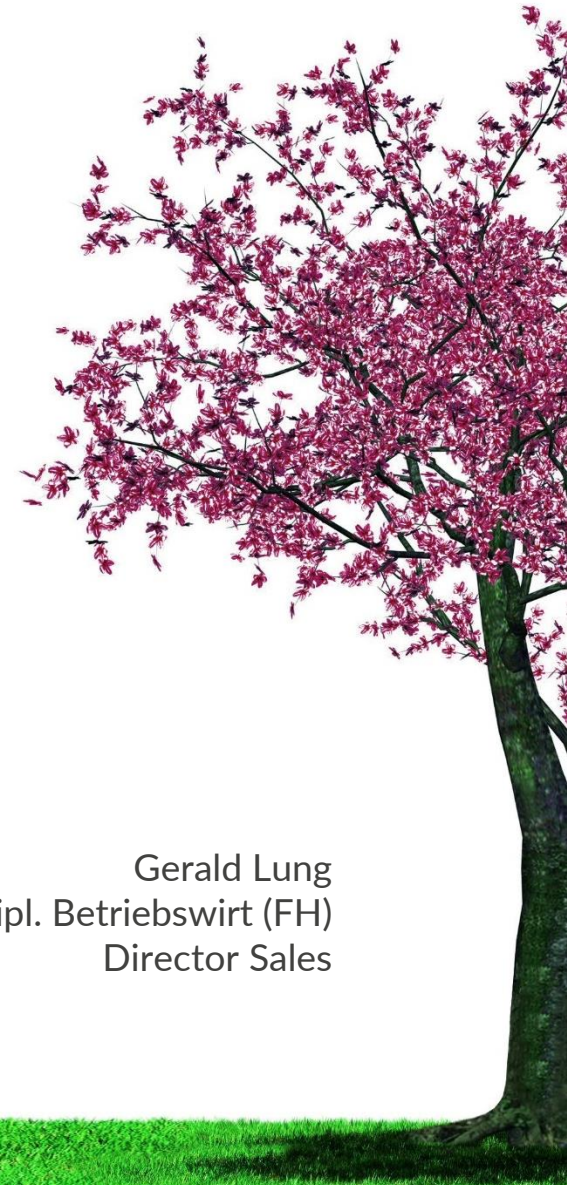




innovations with KLUSA in
construction on our journey with our
customer BMW GROUP AG



Gerald Lung
Dipl. Betriebswirt (FH)
Director Sales



AGENDA



- About OPUS
- About KLUSA®
- Journey BMW GROUP AG and KLUSA®

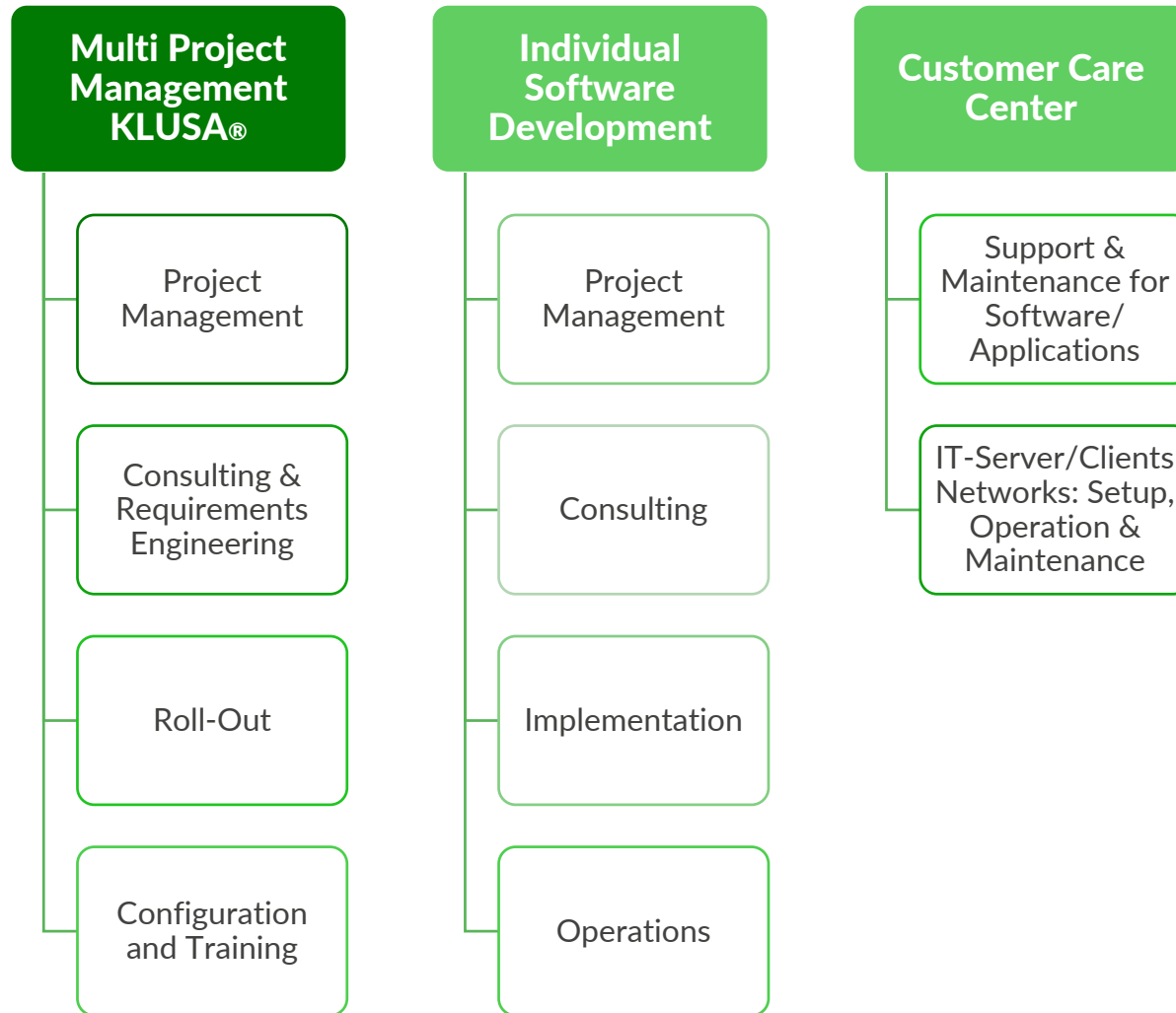
- Founded in 1991
- Location: Munich, Germany
- Employees: 35
- Legal entity is GmbH, privately held
- Developing software solution KLUSA® in Portfolio- and Multi-Project management
- Dev. Partner in Romania
(Software Development, Support)

Our Mission:

Our target is to **provide** our customers **fast and simple** with all **information** in **Project Management Controlling** at **any time** and **any place** in order to finish successfully your projects in a **timely manner** and within your **calculated budget**.

We build Your Project Management **Framework** for **now** and **future**.







Meet business goals & high customer satisfaction

- Target-oriented and fast implementation of customer wishes
- Deliver necessary information needed to any client at any place
- Broad support in running applications



First Class service qualification

- Consulting for multi-project management processes & methods
- Consulting for software architecture
- Consulting and implementation of state-of-the-art programming



Build best of breed Project Management Software

- KLUSA® multi project management tool
- Generic interface development
- Support regarding roll-out and operation



Individual software development

- Based on standard platforms
- Interface development
- Migration of existing applications to modern platforms & code languages

Customer references...



KLUSA® Interface and Navigation



Modules

Module sections

User

Portal
(e.g. a specific division)

Tabs of the selected section

Toolbar

Projects tree structure

Working space

The screenshot displays the KLUSA® interface with the following components:

- Header:** Green bar with navigation icons, 'PROJECTS' dropdown, 'General' dropdown, 'FSC' dropdown, and user 'Buchholz, Ruth'.
- Left Panel:** 'Projects' dropdown menu with a list of projects. The selected project is 'Social Computing'.
- Toolbar:** A row of icons for project management actions.
- Project Attributes:** A form with various fields for project details.
 - HEADER DATA:** Name (Social Computing), Project Code (17010000), Rating (checkmarks and warning icon), Manager (Christmann, Stefanie), Status (4 Running), Current Phase (Not available), Reporting Type (monthly), Folder Project.
 - CATALOGS:** Classification (> 500.000 EUR), Department (Marketing), Business Impact (medium), Location (Munich (HC)), Customer (OPUS (internal)).
 - DATES:** Baseplan Start (01/02/2017), Last Approved Start (01/02/2017), Plan Start (01/02/2017), Actual Start (01/05/2017), Plan End (12/01/2017), Actual End (MM/dd/yyyy).
- Right Panel:** 'Extras' section with additional icons.

MyKLUSA® - Dashboard



Number of open tasks in brackets



...keep track of personal tasks.

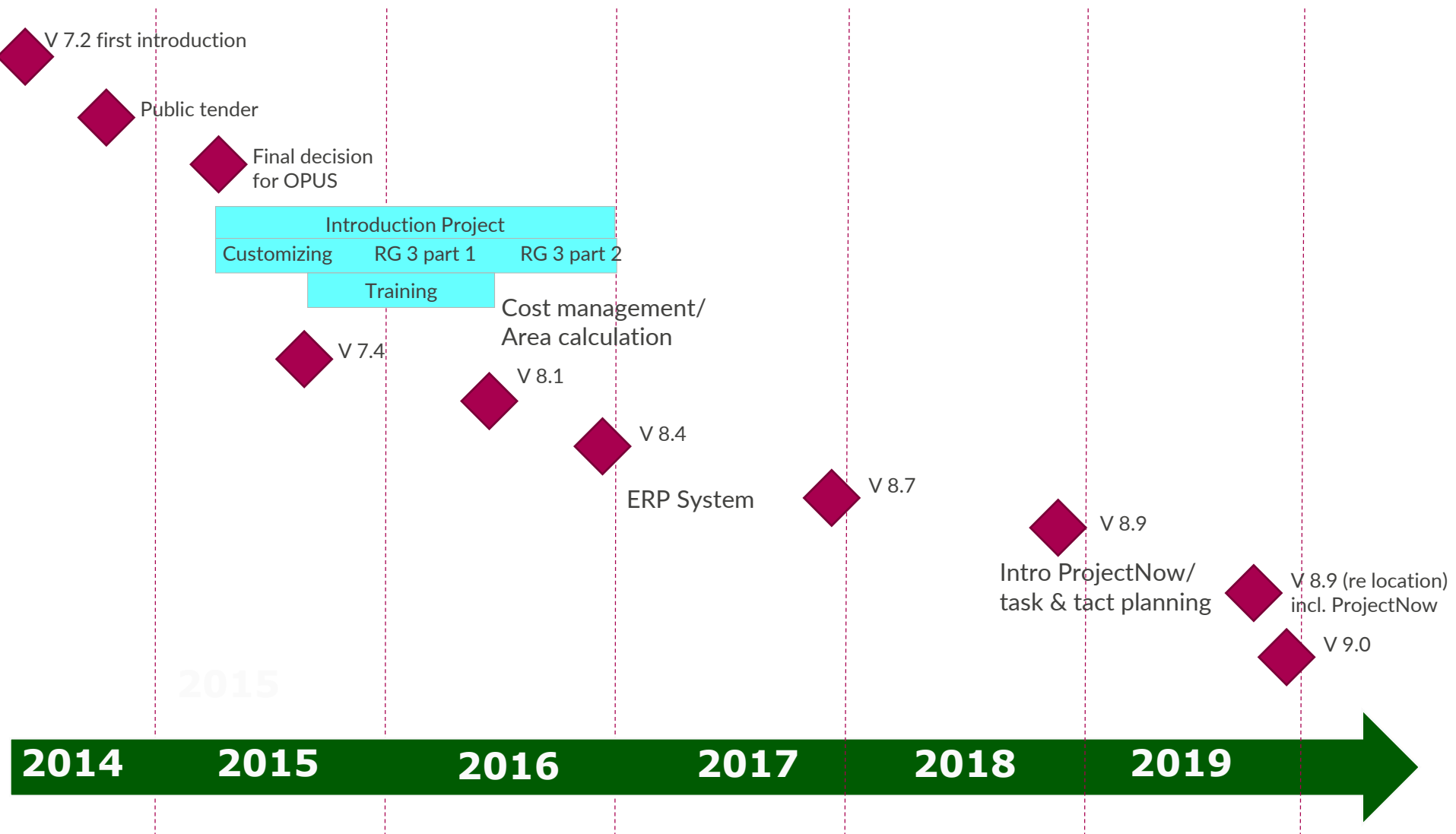
Clicking a tile redirects the user to the respective tab

- **BMW GROUP AG (customer since 2013)**
 - Approx. 135.000 employees worldwide (2018)
 - 31 factories in 15 countries (2019)
 - 2.5 Mio. delivered cars worldwide (2018)
 - 166.000 motor cycles (2018)
 - Fast growing and changing business behaviour depending on their competitors

- **BMW's situation**
 - Prev. PM tool still in place (since 2013)
 - Focusing on most important KPI's - „Time is money..“

- **BMW's challenges within this situation**
 - limited basic functionality for mile stones, cost over view and mandatory reports etc.
 - Task & tact planning
 - strong limited interfaces which could not be changed during software changes in BMW GROUP AG IT- environment
 - General tool for construction branch

Definition Customizing, reports



Cost Management (part 1)



Plankosten editieren

BASISDATEN

Kostenname: 325 - Bodenbeläge

Kosten-Code: auto Material-Code: M15060521

Arbeitspaket: [13] WP7

Start: Okt 2016 Ende: Dez 2016

Kontengruppe: n/a Kostenstelle: CC not defined

	Nov 2016	Dez 2016
EUR (Su...	140.000	140.000
n/a (Qua...	1,00	1,00
EUR (Preis)	140.000	140.000

ATTRIBUTE

Hauptkostengruppe: 300 - Bauwerk-Baukonstruktionen

Grobelemente: 320 - Gründung

Feinelemente: 325 - Bodenbeläge

Vergabeeinheit: 3430 - Bodenbeschichtungen

Vergabepaket: 3460 - Trockenbau

Status: Budget

Typ: Contract

Kostenart (BMW): Invest

Flächenart DIN 277: NF

Funktionsfläche/Mo...: Büro / Office

Hierarchical attributes according
DIN 276

customer specific
catalogue cost attributes

- Situation
 - Branch specific special attributes needed, what KLUSA® not out of the box offers
- Challenge
 - Cover all relevant and important attributes & metrics like DIN 276
- Solution
 - customizing flexibility for such requirement

Comparison ERP SyncManager (classic) vs. ERP SyncManager (new)

	ERP SyncManager (classic)	ERP SyncManager (new)
Transfer format	BAPI, CSV-Import	CSV-Import
Import records	defined timeframe	delta load
Transferred columns (attributes)	16	47
Order of transferred columns	fix	variable
Set of default values	no	yes

- No significant change in general setup/installation

Att.: More attributes of imported actual cost records are editable

- Situation
 - Transfer of 16 pre defined attributes only
- Challenge
 - All attributes in cost management needs to be synced in ERP
- Solution
 - Adjustment to get necessary attributes transferred

Area calculation for BMW GROUP AG - Real Estate



Übersicht **Flächen** Anforderungen

Wähle Flächenermittlung DIN 277 1,00 Ebene < 4 >

Select „Flächenermittlung/metrics“

Areas/ spaces required by user

#	Flächen	Be...	Einheitspr...	Regional Faktor	Quantität[m2]
1	▲ BGF		62,45	1,00	49.000,00
1.1	▲ NGF		57,95	1,00	39.000,00
1.1.1	▲ NF		56,45	1,00	31.000,00
			50,00	1,00	11.000,00
			60,00	1,00	20.000,00
			30,00	1,00	5.000,00
1.1....	TF		30,00	1,00	5.000,00
1.1.3	▲ VF		120,00	1,00	3.000,00
1.1....	VF		120,00	1,00	3.000,00
1.2	▲ KGF		80,00	1,00	10.000,00
1.2.1	▲ KGF		80,00	1,00	10.000,00
1.2....	KGF		80,00	1,00	10.000,00

DIN 277 "Flächen und Rauminhalte im Hochbau"

Flächen - Schema nach DIN 277

Die Bruttogrundfläche **BGF** bildet die Summe der Grundflächen aller Grundrissebenen eines Bauwerkes $BGF = NGF + KGF$

Die Nettogrundfläche **NGF** gliedert sich in Nutzfläche **NF**, Technische Funktionsfläche **TF** und Verkehrsfläche **VF**

Die Grundflächen der aufgehenden Bauteile aller Grundrissebenen eines Bauwerkes ergeben summiert die Konstruktionsgrundfläche **KGF**

Die Nutzfläche **NF** wird entsprechend der tatsächlichen Nutzung in weitere Gruppen unterteilt

Bruttogrundfläche BGF

=

Nettogrundfläche NGF

+

Konstruktionsgrundfläche KGF

Nutzfläche NF

+

Technische Funktionsfläche TF

+

Verkehrsfläche VF

Wohnen und Aufenthalt

Büroarbeit

Produktion, Hand- und Maschinenarbeit, Experimente

Lagern, Verteilen, Verkaufen

Bildung, Unterricht und Kultur

Heilen und Pflegen

Sonstige Nutzungen

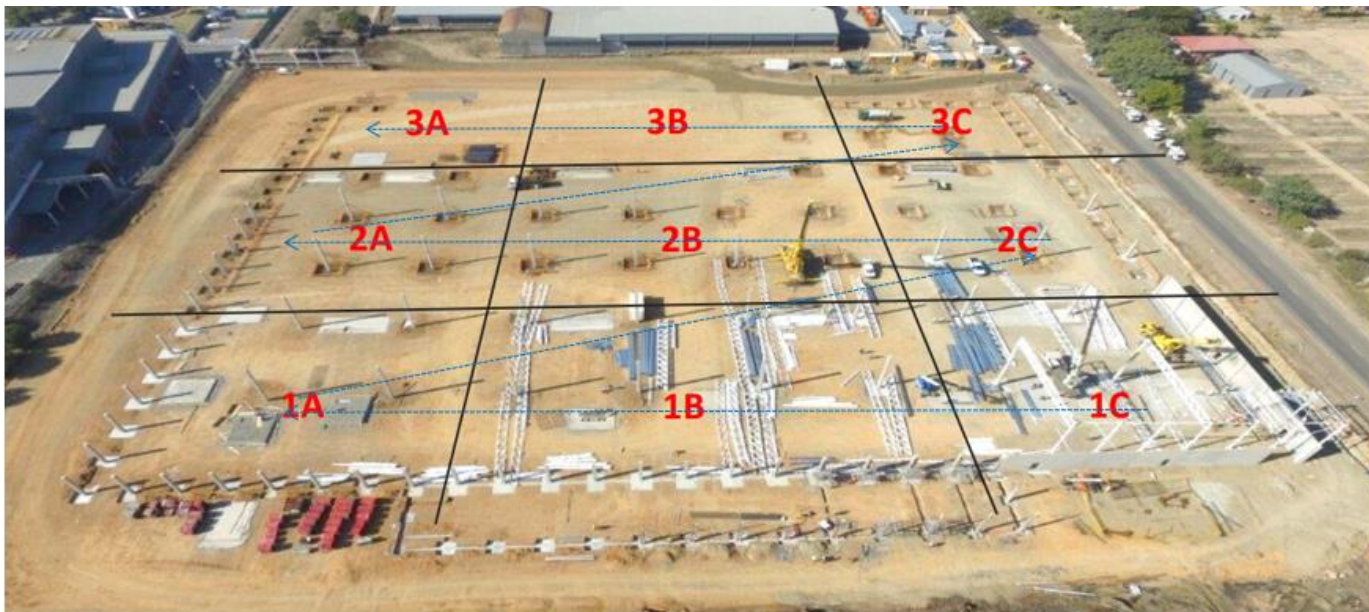
Betriebstechnische Anlagen

Verkehrerschließung und -sicherung

- Situation
 - Cost calculation one of the most important KPI's in construction
- Challenge
 - Implementing a functionality of calculation sheet
- Solution
 - customizing calculation sheet incl. necessary attributes

Task & Tact Planning

- Situation
 - Complete process depends on every single task finished – „step by step...“
 - Bottle neck in terms of failure
- Challenge
 - Get more up to speed in opening new Sub projects and work package
 - Just want to get more creative and productive ideas internaly
- Solution
 - More tasks handled simultaneously while increasing efficiency



ProjectNow V1.0 starting in Oct/ Nov. 2019



- Situation
 - New projects needs to be open always in KLUSA® and takes often a long time
 - Access for registered users only
 - Complete Management of their re location (i.e. offices, part of factories, etc.)
- Challenge
 - Get more up to speed in opening new projects
 - KISS – keep it simple & stupid
 - Just want to get more creative and productive ideas internaly
- Solution
 - more poeple outside the project team involved with such mobile app

The image shows a login screen for 'ProjectNow'. The title 'ProjectNow' is at the top in a large, bold, blue font. Below it, there are two input fields: 'Domain\q - Number' with the text 'Helmut.Zeller' and 'Password' which is empty. A 'Login' button is positioned below the password field. At the bottom of the screen, there are logos for 'BMW GROUP', 'BMW', 'Rolls-Royce', and 'Rolls-Royce Motor Cars Limited'.

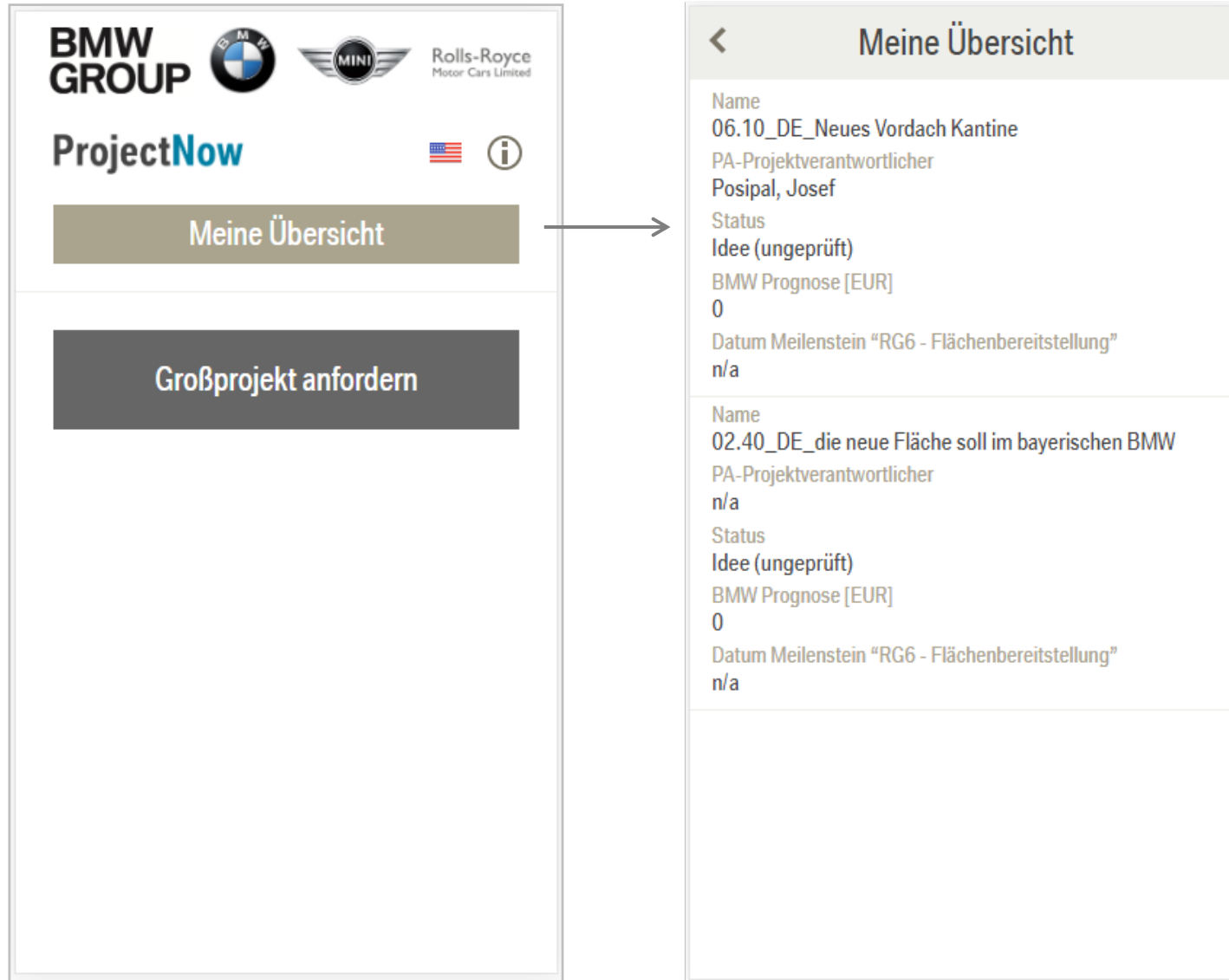
ProjectNow V1.0 starting in Oct/ Nov. 2019



The image shows a mobile application interface for 'ProjectNow V1.0'. On the left is a sidebar menu with the BMW Group logo, the ProjectNow logo, and two buttons: 'Meine Übersicht' and 'Großprojekt anfordern'. An arrow points from the 'Großprojekt anfordern' button to a detailed form on the right. The form contains the following fields:

- Liegenschaft / Standort**: 06.10 - Plant Regensburg
- Anforderer / Gesamtprojektleiter**: Zeller, Helmut
- Strategische Bestätigung**: (Empty text box)
- Kostenziel [EUR]**: 600.000
- PSP-Element(e) / Kostenstelle**: 4711
- Beschreibung**: Neues Vordach Kantine

ProjectNow V1.0 starting in Oct/ Nov. 2019



ProjectNow V1.0 starting in Oct/ Nov. 2019



MEINE ÜBERSICHT (50+) PROJEKTANFRAGEN PROJEKTE MANAGEMENT PORTFOLIO RESSC BMW PA Zeller, Helmut_Admin_e

Übersicht Dashboard **Projektdaten** Projekteinhalt Flächen & Anforderungen Kernteam Risiken Chancen Änderungen Terminplan Taktplanung Ressourcenanalyse Kosi

Projektattribute Diagramm Projektkennzeichen Anmerkungen Projektideen Portale Portfolio ERP Identifikator Extras

Projekt: [19040000] 06.10_DE_Neues Vordach Kantine

KOPFDATEN

Name	06.10_DE_Neues Vordach Kantine		
Projekt-Code	19040000	Bewertung	✓
PA-Projektverantwortlicher	Posipal, Josef	PA-Designverantwortlicher	
Status	Idee (ungeprüft)	Priorität	
Aktuelle Phase	Nicht verfügbar		
Berichtstyp	wöchentlich	Projekt (übergeordnet)	









KATALOGE

Immobilienkategorie	n/a	Regionale Zuordnung	D / A
Schwerpunkt der Maßnahme	n/a	Land	Germany
Projektkategorie	n/a	Liegenschaft / Standort	06.10 - Plant Regensburg
Finanzierungsmodell	n/a	Gebäude	
Finanzierung	n/a	Werk / Region	06 - Plant Regensburg
Ressort		Klassifizierung	n/a
Verantwortungsbereich		Region	n/a
Produktlinie / Programm	n/a	PV Organisationseinheit	n/a
Derivat		DV Organisationseinheit	n/a

TERMINE

KLUSA® Features



Module, Interface		Essential	Professional	Enterprise
	My KLUSA® General and user specific overviews	✓	✓	✓
	Time Accounting Project time accounting and completion, maintenance of absences	✓	✓	✓
	Demands Project preliminary phase with scope, dates, costs and resources, documents			✓
	Projects Risks / opportunities, project structure and scheduling, tasks, resources, budget, costs / benefits, documents, reports, plan variants, change management	✓	✓	✓
	Management Dashboards and multi-project views on deadlines, costs, resources, etc. Data exports to MS Office Excel, Word, PowerPoint (Report Designer)	✓	✓	✓
	Portfolio Portfolio composition, portfolio scenarios, feedback to demands & projects			✓
	Resources Company-wide resource management, representation of the line organization, departments, teams and employees with specialized profiles/qualifications and capacities			✓
	Companies Supplier/vendor and customer management with their connection to projects offers/orders/invoices, competitor analysis			✓
	Administration System administration, user and role management, catalog/list management	✓	✓	✓
	ERP Sync Manager (Interface) Automated project-related import of actual costs from ERP systems		✓	✓
...	More Interfaces AD/LDAP User Sync, MS Office Project Addin, customized interfaces			✓

Thank You...

OPUS Business Solutions GmbH
Landsberger Straße 290
80867 München
Germany
Phone +49(0)89-45229-100
eMail: Gerald.Lung@opus-gmbh.com

