



Hexad GmbH Company Presentation

Stand: Nov 2020

Hexad GmbH Company Presentation

1

“Who we are”

Introduction of Hexad and its DNA
A success story in Software Development



2

“What we do”

Introduction of our successful work and extensive experience in Software Development
Hexad value proposition



3

Referenzen

Selection of innovations made by Hexad for various business fields, empowering our valued clients



Hexad GmbH – „Who are we?“ Company presentation

“We are Hexad – making organizational transformation easy and transparent”

Founded: 2010

Founder & Owner: Suresh Shamanna

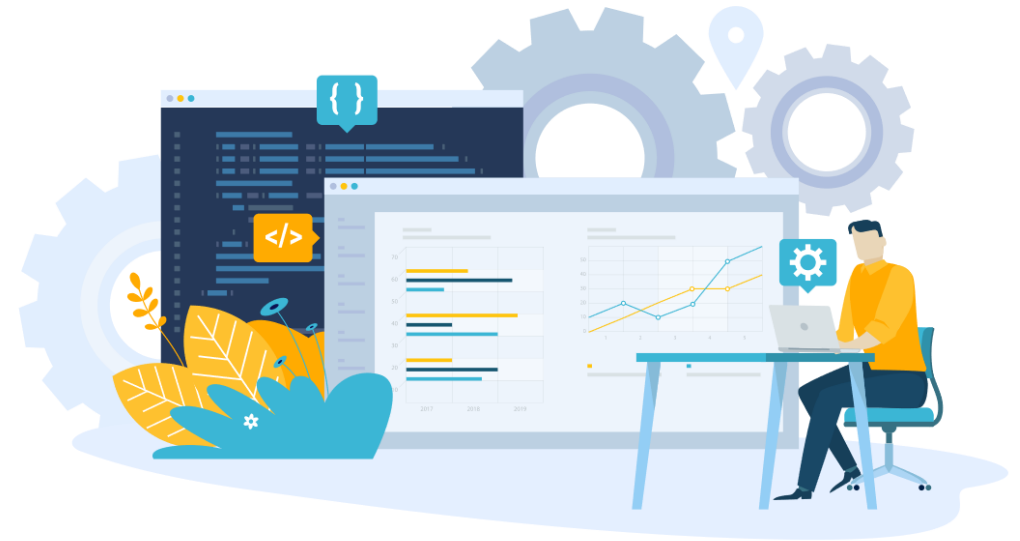
Head Office: Wolfsburg

Locations in Germany : Wolfsburg, Hannover, Berlin, Ingolstadt, Frankfurt

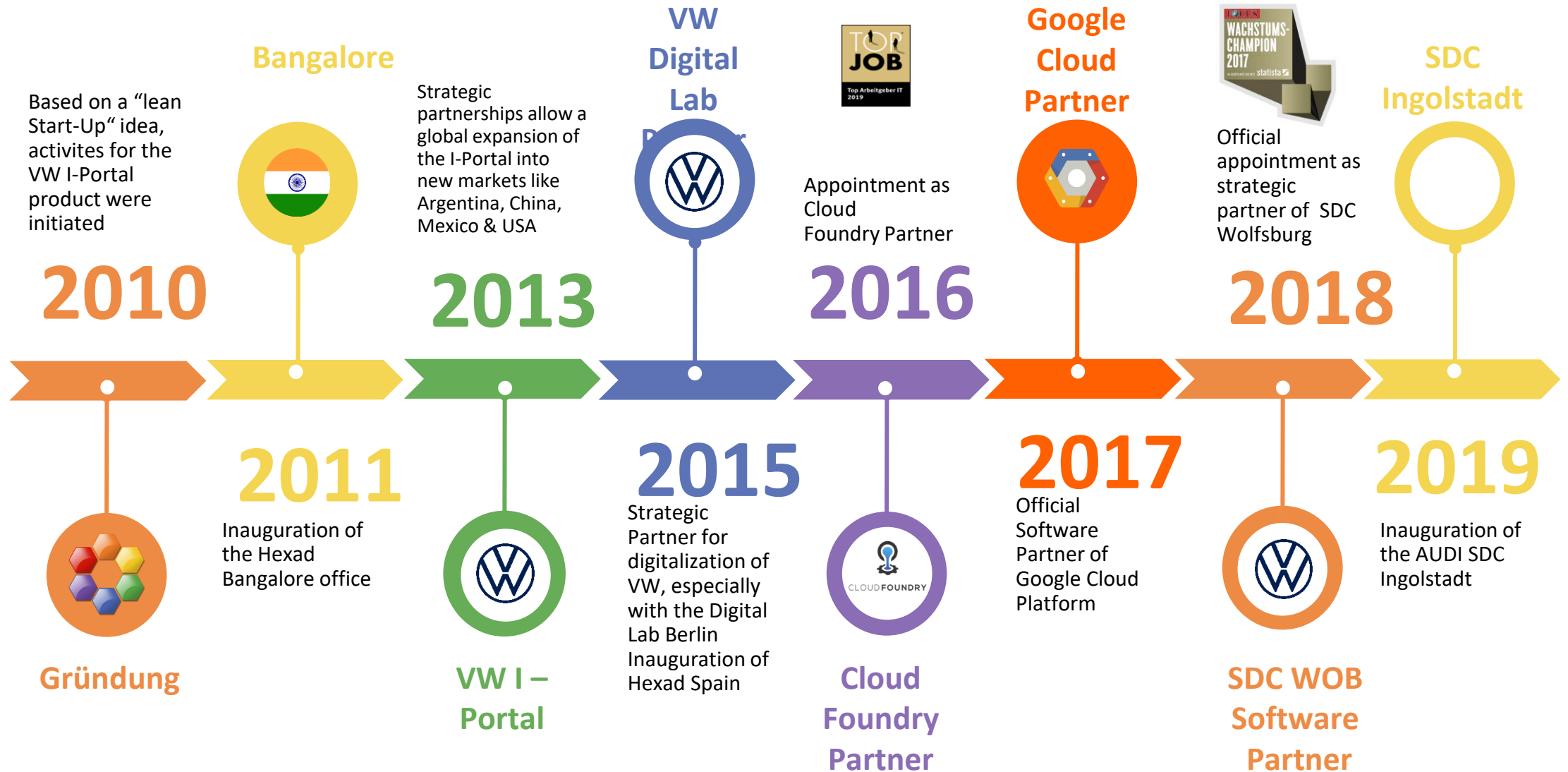
Hexad Global: Germany, Spain, India

Client Base: Automotive, Finance, Sport, etc.

Employees: > 200 employees, from over 30 nations



Hexad GmbH – „Who are we?“ Company presentation



Hexad GmbH – “Where we are” Locations around the globe

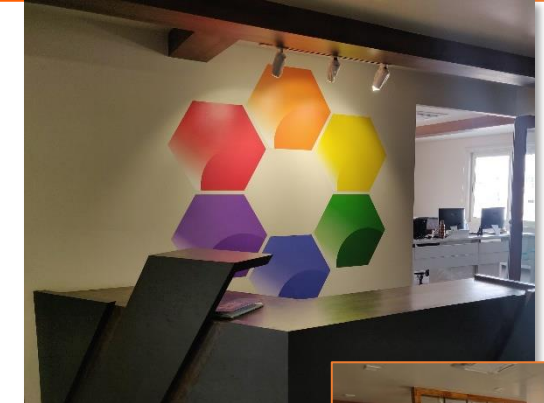
With over 60 employees in our head office in Wolfsburg it is not only our biggest location in Germany, we also have a capacity to expand to 350 employees - in line with our projected growth targets. In Bangalore we even have a capacity of up to 80-90 employees in support of our ambitious targets for the global market.



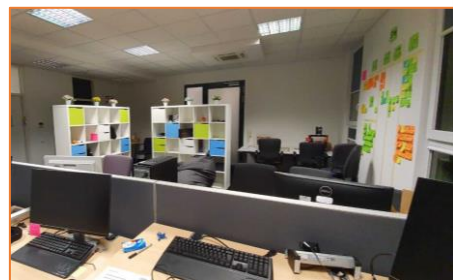
Wolfsburg



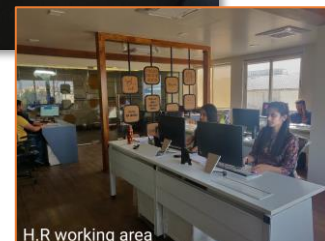
Berlin



Bangalore



Ingolstadt



H.R working area

*Additionally we have a technical expertise office in Barcelona with a capacity of >30 people

Hexad GmbH – Company Presentation – Our locations and employees



Over 200+ multi-national employees belonging to over 30 nationalities work in our locations in Wolfsburg, Berlin, Hannover, Ingolstadt, Barcelona and Bangalore.

We support the rapid growth of Hexad globally and have the ability to effectively:

- Scale rapidly according to the demands of a project
- Station teams close to the clients in Wolfsburg, Berlin, Hannover and Ingolstadt
- Offer expertise knowledge out of our Near Shore office in Barcelona and Off-Shore in Bangalore
- Nurture and maintain a „Beach“- pool to deliver the best fitting know-how to any challenge

Hexad GmbH – Company Presentation – Successful growth



61%

Hexad: A story of continuous growth

61% growth within 4 years

Hexad GmbH – Social responsibility

We support orphanages and senior homes in India and are planning a Computer Coaching Centre in Germany for citizens with special needs. Furthermore we actively sponsor sporting events, as the annual Wolfsburg Marathon is named after Hexad and are sponsor of the international football club VFL Wolfsburg and the ladies Handball team Wolfsburg Hurricanes.



A large, stylized graphic on the left side of the slide. It consists of a light gray parallelogram with a green hexagon overlapping its top-left corner. Inside the green hexagon is a large white number "2". At the bottom-left corner of the gray parallelogram, there are two small green interlocking gears.

2

“What we do”

Introduction to our work and how we ensure a continuous delivery of sustainable high quality to all our clients in the field of Software Development. We present our value proposition across business field and tasks and will dive into our core competencies as well as special know-how, setting Hexad apart.

Hexad GmbH – Company presentation – „what we do“ Our Mission & Fields of Operation

Service

Planning & Consulting
Development & Deployment
Hand Over & Operation

Technology

Platform – Cloud Foundry, AWS, MS Azure, etc
Open Source Software Specialist
In-House Platform Products
In-House API Products

Business
Processes

Sales & Marketing
Supply Chain
CRM/MM/ERP
Internal Processes

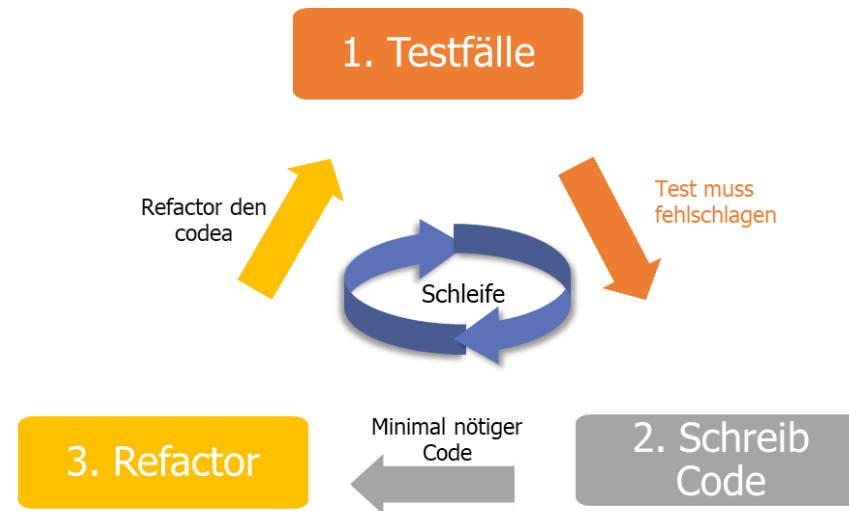
Core competencies in Software Development – „what we do“

- Scaling – Fast and efficient every time:
 - Teams can be scaled according to the need within short notice to engage complex challenges, solving problems fast and lasting
- Code Analysis – Specialist for every field
 - Hexad has the specialists and the know-how to support any requirement from the business side. From Business-Analysis, BI, Frontend- and Backend-Developer as well as Project Manager we can cover the whole range
- Test-Driven-Development (TDD) ⓘ Motto of Hexad: "Lean & Clean"- Code
 - Hexad focuses on developing an easy to maintain code which is mostly kept steady due to the used method of Test-Driven-Development
- Competent QA- Prozess
 - Hexad supports projects with an experienced ,dedicated Quality Manager and an evaluated test procedure which will test the implemented User Stories against their acceptance criteria, before handing them over to the client.

Further Hexad competencies in Software Development – „what we do“

- DevOps integrated into the development from day one
- CI/CD using Concourse
- Hexad “Post- Implementation“- Support for Apps, complete Systems and Platforms
- Open Source TechStack
- “Lift & Shift“ - Monolith to Cloud, „we transform everyone in need“
- API-as-a-Service
- *Complete development teams* in clients proximity

Core competency: Test Driven Development (TDD) – „what we do“



- + Developer is from the start in the role of an user and remains close to reality in every test scenario
- + High trust in code, since only "Pass" elements will be taken over
- + Code is modular, easy to extend and flexible in terms of maintenance and
- + High Quality Code from the start with lower possibility of failure

Core competency: Quality Concept/Quality Assurance

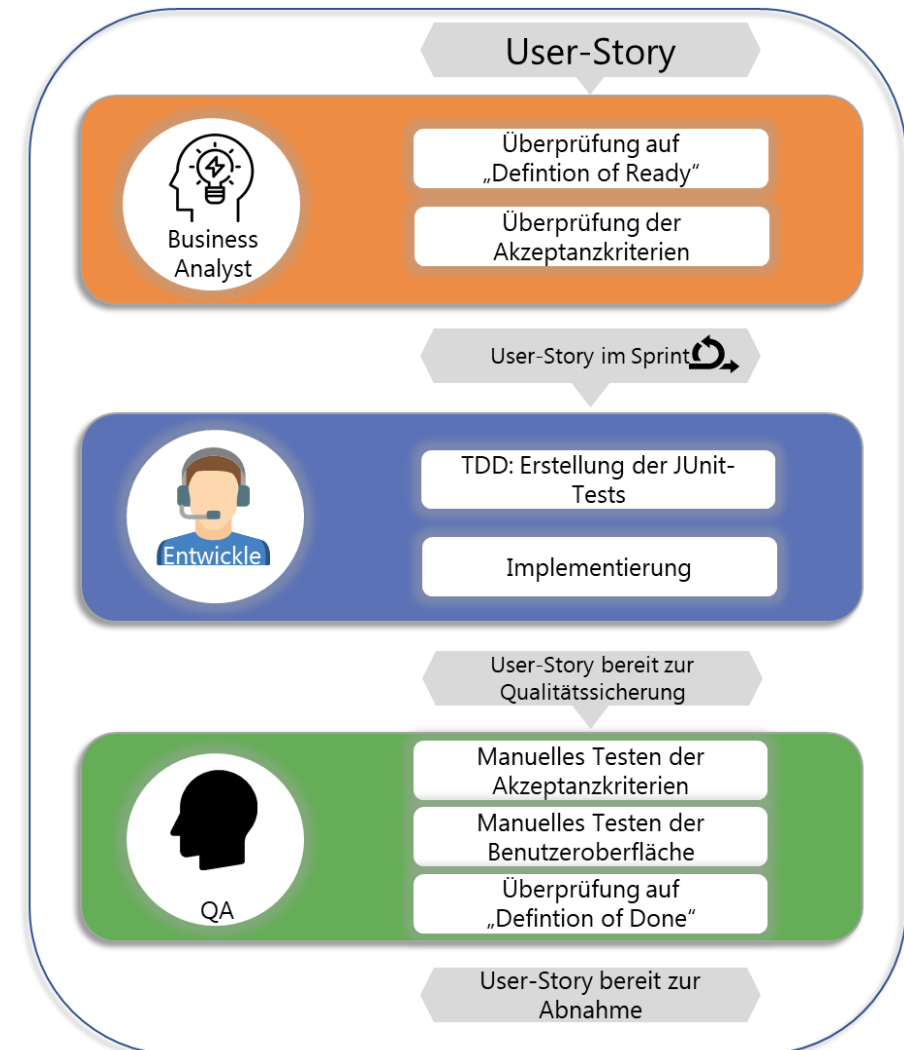
Goal: Ensure Error Free operation (as far as possible)

Before an user story can be implemented and therefore be put into a sprint the Business Analyst operates as gate keeper for **evaluation** whether the story fulfils the **definition of ready** and that the **acceptance criteria** is defined and eligible for testing

The development follows the **TDD approach** by first writing the JUnit tests, based on the provided acceptance criteria, before **implementing** the user story itself

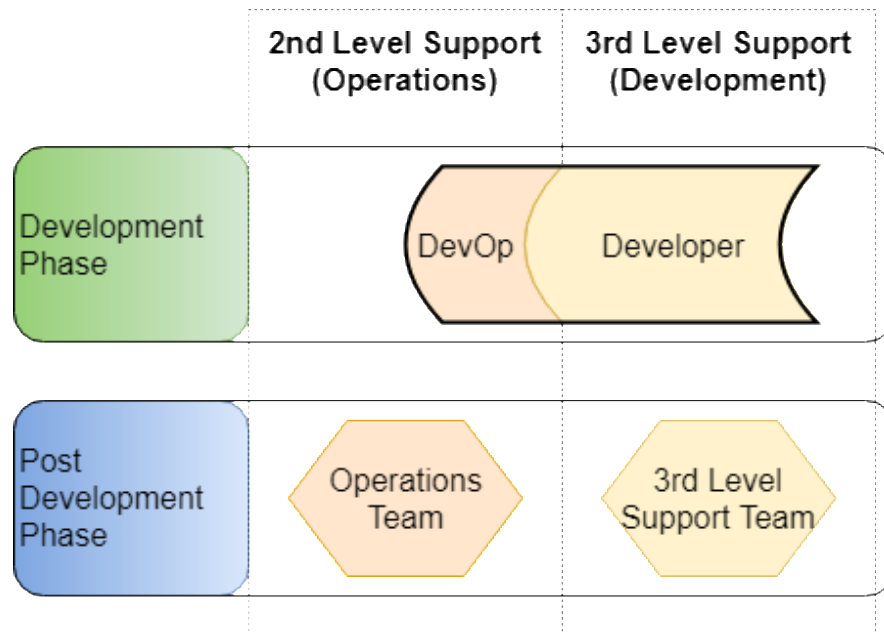
After finishing the implementation and fulfilling the written test cases the user story is handed over to the QA who **evaluates manually each acceptance criteria** in the story and finally tests the User Interface and its UI Experience

Finally the **story is handed over** to the business for further testing



Core competency: Effective DevOps in every phase

Hexad offers an effective DevOps in each phase of the development while during the progress of the development the team handles operational tasks and is the main contact when it comes to any topic in respect to the project they are working on. After the handing over the dedicated Hexad „Post Implementation“-Support Team can be offered which would in self-initiative operation control the whole Software- Operation. Thus Hexad would remain the „Single Point of Contact“ guaranteeing a neat operation from day one.



One team responsible for Development and Operation

Dedicated teams for 2nd and 3rd level Support under the Hexad “Post Implementation” – Support

Core competency: DevOps in the Hexad-World

The DevOps philosophy allows development engineers and operations to work and live together through the life cycle, from design, over development to production and support. The early and deep involvement of Operations is a key contributor to the DevOps success, as the team takes on more technical responsibility while enriching the whole cycle with its processes.

- How is DevOps implemented:
 - Usage of Repository, i.e. GitLab for clear documentation of the development
 - Concourse Pipelines
 - PaaS based on Cloud Foundry
 - Usage of ITIL for Incident-, Problem- and Change management
- Which value does Hexad offer the client/project:
 - DevOps is part of the development → Our engineers all follow DevOps practice
 - Shorter response time with capability to cover the infrastructure part as well
 - The used tools guarantee that the steps and actions are clearly defined and documented
 - Self-governing teams which take on the ownership of the project under frequent exchange with clients
 - Specialist in Monitoring and „*Continuous Integration (CI) /Continuous Deployment (CD)*“
 - Experienced in the rollout of Codes and Infrastructure based on complex platforms. Serenity
- Some example projects where Hexad GmbH used DevOps successfully:
 - Migration project, WeConnect, Predictive Maintenance



Core competency – Special Service: DevSecOps – Hexad sets the mark!

IT-Security is more important than ever and an integration into the lifecycle of Software should be the part of the standard process. This is also to ensure that the agility and speed of reaction of the DevOps philosophy is fully made use of.

DevOps + Automatization ? Safety

- How is DevSecOps implemented:
 - Integrated into the process from day one – Safety of Infrastructure and the Application
 - Automated Safety
 - Programming with the consciousness for safety from the very beginning
 - Benefit-/Risk Analysis
 - Data safety implemented from the start
- Which value does Hexad bring the project:
 - Shorter response time with the additional feature that security is covered as well
 - Steps and Actions are clearly defined and documented
 - Centralized User Identity Control process
 - DevSecOps integrated in our DevOps team – Safety-, Network- and System Engineers work simultaneously towards the common goal
 - Safe Solutions out of one hand

Core competency: Hexad Post Implementation Support

Key element of our „Operations & Support“ is the “Application Management Service“ which is already well established across the board in the Volkswagen Group and a core pillar of Hexads business model. We understand the importance of a 360 degrees service and therefore this section is among the fastest growing inside Hexad.



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3

References

A very few selected list of innovations successfully accomplished with and for the Volkswagen Group, establishing Hexad as a trusted partner and reliable innovations leader.

References: WeConnector – Hexad as innovation partner for the VW Group

Project Goal:

Initially just a interface between two systems, this project developed to a complete project under Hexad roof. Today the We Connector is a growing product which offers a reliable and solid interface layer interconnecting a vast amount of systems and created as well a usable Frontend the entry of data and information related to MOD 3.

Hexad Responsibility:

- Development of a Backend with option of a flexible extension in all directions
- Development of an effective API which is able to connect a vast amount of systems
- End development together with clients from various businesses within VW
- SCRUM Lead

Added- Value:

- Hexad delivered on time
- Even complex and frequent adjustments were handled effectively according to agile methods
- Rapid adjustment and realization of complex and changed interfaces
- Corner- Cases and interfaces were documented in detail
- Productive and well working partnership with the Client



Capabilities on Hexad side:

Handling of complex platforms and ability to think and act End-to-End from user until DB

Interface Management and implementation

Look beyond just the task at hand and develop future oriented ideas

Hexad came with the vision to create the product which exists today out of a visions developed in or labs

Frontend as well done by Hexad

References: Vehicle Activation Service (VAS) Hexad as innovation partner for the VW Group

Project Target:

Vehicle Activation Service (VAS) allows a “one-stop” self-service vehicle registration for end users. It has important features like Owner- and User verification integrated and if once registered over VAS the User has access to the whole world of the “We-Family”

Hexad Responsibilities:

Developed the whole product

Developed Back End and API with multiple extension options

UI development

Maintenance, Extension and Change

Re-Design Orders

UI/ UX Improvements for mobile and web based machines



Added- Value:

Ability to look past the requirements and consult/recommend changes to improve an existing system

Momentarily a „Unified Flow“, VAS will be in future transform into a platform, integrating further applications

Targets were fulfilled on time

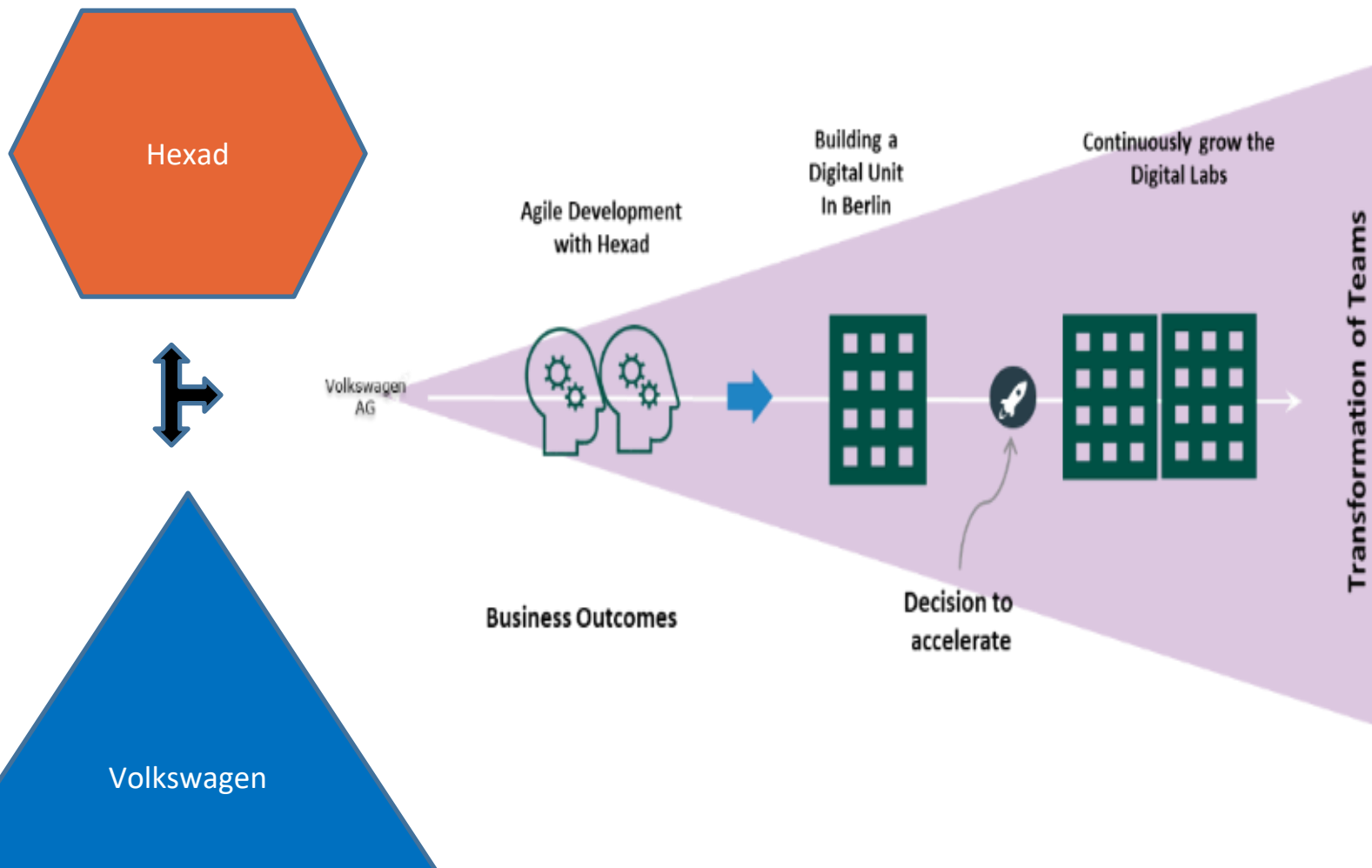
Capabilities from Hexad:

Complex platform handling and the ability to think End- to- End from User to Data Base

Question existing systems in order to set them up for a future improvement

Efficient product growth planning

References: Digital Labs Project Berlin, Future oriented partnership with Hexad



- Innovative Software solutions
- Next Generation of digital platforms
- Cloud-based solutions
- Next Gen of fully connected and digitalized cars
- Seamless connection of mobiles, laptops and tablets
- Examples of products from the DigiLab: Identity Kit, WeProfile, WeConsent, Connected Car, WeDeliver, Developer Dashboard etc.,

References: Products from the DigiLabs: IdKit (IdentityKit Cluster)

Project Target:

Develop the best Id Provider for all customer facing services in the Volkswagen ecosystem. As such IdKit is the one-stop solution for integrating user login/registration into customer facing apps running within the Volkswagen ecosystem. It implements the OpenId/ OAuth2 specifications so it is more than just login/registration but also has additional functionalities:

* Token exchange for talking to other Id Providers & User impersonation for services talking on behalf of users

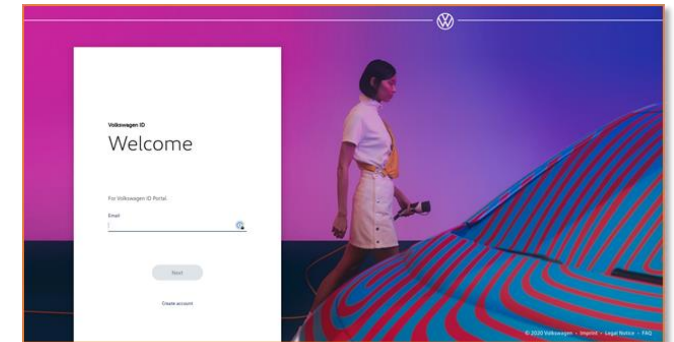
Hexad Responsibilities:

Product Management

Frontend and Back End

DevOps

„Post- Implementation“ Support



Added- Value:

Hexad devs worked hand in hand with VW devs to build up IdKit to the successful product it is today

Devs highly familiar and aligned with the engineering practices in DiLab help to maintain the quality of the product

High focus on customer satisfaction in support

Very close and well working relationship with VW DiLab

Capabilities from Hexad:

Complete End-to-End Testing

Hexad „Post- Implementation“ Support Team operates and supports the service until today

References: Products from the DigiLabs: Customer Profile (IdentityKit Cluster)

Project Goal: Customer (End users) profile management

“Customer Profile” collects User Information (Name, email,...) and provides these to applications and programs which need these information for their operation. Safety-Protocols and User identification play an important role at “Customer Profile”

Hexad Responsibility:

Hexad team was part of the overall developer team

Developed Backend and Frontend

Usage of TDD- Method

Added- Value:

We developed microservices architecture

Always on time, well and effective communication, even short timed changes could be implemented without issues

We use Kotlin, Java, Groovy in backend

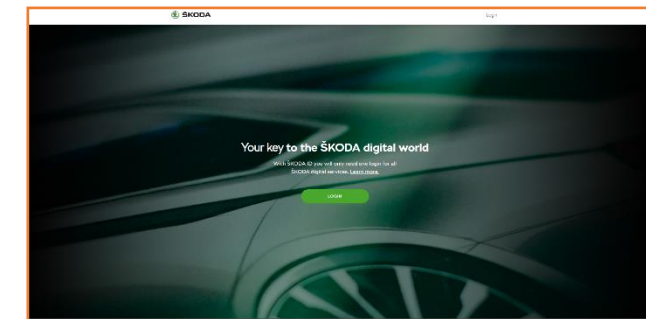
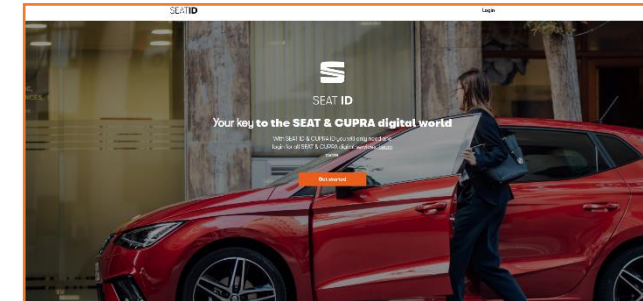
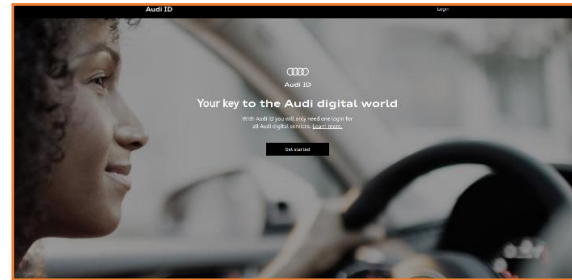
We use Typescript, JavaScript in frontend

We have full stack development experience

Capabilities from Hexad:

Designed the Microservices

Complete End-to-End Testing



References from the SDC Berlin: We-Deliver

Project Goal:

We-Deliver as the name describes, facilitates a vehicle owner/user to get their goods and services delivered to the trunk of their car. Identification, verification, as well as Opening/ Locking of the trunk from afar are key topics handled by this program.

Hexad Responsibility:

From Kick-Off, sail through until the production release Hexad engineers were part of the development
Back End and Front End - Using suitable technologies
Consult on various levels to unblock the team from all the blockers

Added- Value:

Decision on choosing suitable tech stack
Best practices for eXtreme programming

Special Capabilities from Hexad:

Embrace extreme programming values follow pair programming and TDD
Seamless and usable User experience focused
Responsive UI
Liaising with partners to ease API integration
Conduct on-site meets with partners



References: Platforms and projects crossing the brand barrier

Hexad has extensive experiences in handling and working with the **Serenity Platform**, upon which we today support many programs and applications, be it Frontend or Backend. **Core-App**, is an example where we are part of the development team. Further platform related projects are the migration of „Legacy“- products onto ODP, like AUDI MBB



Predictive Maintenance



WePark



ODP

As part of the development of the **Car-Net** universe, Hexad developed Frontend and Backend in cooperation with multiple business units within the VW Group and brand landscape which allowed an integration of the **I-Portal/GRP**. Latter is a complete development of Hexad and provided our clients a solid base to integrate the next generation of application integration platforms, like i.e. **Service Portlet**, where Hexad as well was part of the development team. The program today support Call-Center agents and After-Sales Teams in their daily work and allows the change of “Härtegrad” to the highest level.



Car-Net



I-Portal

References: Platforms and projects crossing the brand barrier - MOD4

Within the MOD 4 world Hexad is part of the following projects and programs:

Registration ex works: When acquiring a car at a dealer it gets automatically registered in the VW System and will be personalized as well.

Pre-Order function: Tracking of the vehicle status, pre-ordering of single items- „Function on Demand“

Personal Licenses: The license is not bound to the vehicle but to the user and are usable in all MEB based cases

Frontloading of the “AGB”: Required component for using a secondary User Management

Authentication: Various Possibilities for identifying an user (via Digital Key, BLE, etc..)

References: Cloud Specialist/ Cloud based projects



- Due to its broad skill set and performance when it comes to cloud-native areas, Hexad has been chosen as partner of Google for their platform initiatives
- Our DevOps Team has developed the following products/ services in cooperation as a partner of Google: Google Cloud environment set up, resource planning, installation and configuration of CF, PCF, Subnetting, Firewall rules, IAM Accounts, Google cloud API's activation, etc.
- Hexad is a specialist in the field of aws and is able to use its cloud computing capabilities in all steps of Cloud Management: Planning, Implementation & Set Up, Operation & Monitoring (aws cloudwatch) and Trouble shooting



CLOUDFOUNDRY

- Hexad is silver member of the Cloud Foundry society and works closely with it in matters of cloud services.
- Creation and release of CI/CD Pipelines Concourse on Cloud Foundry
- The CF Application run-time and CF container run-time simplifies the whole development process, as well as Build- and Deployment cycles. In those areas Hexad has proven to be a knowledgeable and capable partner
- With the help of the open-service broker API, Hexad uses the advantages of the API first micro-services approach, improving the application runtime
- Using of concepts like “stem cells, releases and a deployment manifest”, to keep up the unity of the cloud environment

Strategic Partner for Volkswagen Group

- Hexad has struck a deal worth 20M Euros with the new organization of Volkswagen Group called Car. Software Organization for two years
- Hexad is already a strategic development partner for Volkswagen Digital labs with the deal worth 46M Euros spread across three years
- Hexad is an Audi partner with a deal value of 10M Euros
- Hexad has a partnership deal of 12M Euros with Software development centers within Volkswagen Group
- Our client product portfolios will enable us to deliver consistent growth over the next years, and targeted to achieve a Gross revenue of 100M Euros in the next 2 to 3 years.

Commitment to EEO and Sustainability

- As an equal opportunity employer, Hexad *fosters a nature of diversity and acceptance* across the board and on all business levels and strictly follows non-discriminatory practices. This is not only limited to hiring practices, but as well incorporated into all daily work processes in our locations around the globe.
- Hexad GmbH believes in the importance of *sustainability and green economics*, making sure that today's business needs are met with keeping a prosperous future for the coming generations in mind .



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Thank you