

# DESIGN-TO-VALUE MACHINE BUILDING CONCEPT

## PRODUCT ENGINEERING FOR MID-MARKET SEGMENTS

What are your local target markets, applications and customers?

Is your local supply chain structure optimally set up to achieve target costs?

Do you offer the right technical solutions for your target customers?



Are you ready to adapt to a dynamic market and customer environment?

Do you have a clear unique selling point (USP) against your competitors?

**YOUR LOCAL EXPERT**  
DESIGN-TO-VALUE COMPETENCE CENTER

## SUSTAINABLE GROWTH WITH MID-MARKET PRODUCTS

Nowadays' emerging market strategies of foreign companies, especially European technology leaders, are still focused on transferring their globally proven product portfolio to cater local market needs. While such a premium segment approach remains valid and margin-attractive, potentials in the growing mid-market are lost. Where machine "downgrading" approaches have failed in the past, the successful concept "designed locally" is gaining popularity – leveraging local engineering capabilities to better address local customer requirements.

EAC has been active in key global manufacturing hubs, especially in Asia, since the mid-1990s. Our mechanical engineering knowledge, local resources and existing networks enable us to apply our holistic Design-to-Value practice to your individual needs – as a closed loop from product development to product launch. We will provide you with customized product engineering advice for suitable machine building concepts to overcome emerging market challenges.

Benefit from our proven Design-to-Value track record and extensive market insight and use us as a close knowledge partner to achieve your product success and market growth.



DIETMAR KUSCH  
EAC Partner Munich



JOHN DENG  
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## KEY CHALLENGES FOR FOREIGN PLAYERS

Today's machine builders are faced with tremendous challenges in developing the right machine concept for emerging markets

**MARKET SEGMENTATION CRITERIA** - growing difficulties to define appropriate machine concept for target market segments

**FIERCE COMPETITION** - increasing competition not only from foreign players but also from improving local manufacturers

**FAST-GROWING AND DYNAMIC MARKETS** - new applications and developing technologies e.g. Industry 4.0, IoT and Automation

**CUSTOMER REQUIREMENTS** - difficulties to grasp local customer requirements which are constantly changing

**COST INCREASE** - increasing costs for labor, raw materials and utilities require adequate counter-measures („Make-or-buy“)

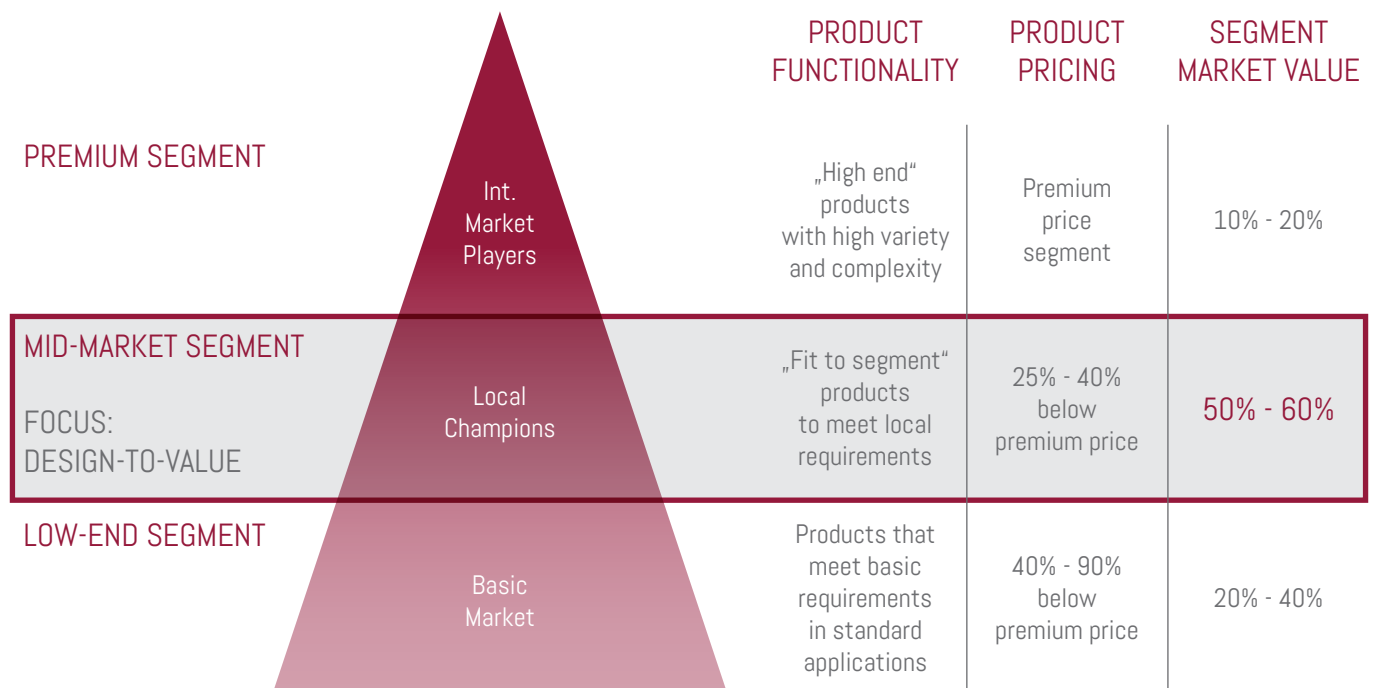
**LOCAL SOURCING** - difficulties to identify local suppliers to meet sufficient quality requirements at target costs

**INDUSTRY STANDARDS** - different industry standards cause ambiguity for key machine criteria, e.g. safety precautions

**CULTURAL DIFFERENCES** - colliding mindsets (Western vs. Eastern) result in diverse machine building philosophies

# TYPICAL MARKET SCENARIO IN EMERGING MARKETS

While western players still follow premium segment focus, incremental growth requires successful participation in untapped mid-market segment



Based on our experience in emerging markets, EAC witnessed that the premium product offering of many **WESTERN PLAYERS LACK COMPETITIVENESS** to enter the highly attractive mid-market. On the contrary, **LOCAL PLAYERS** which already obtained a strong mid-market position define ambitious targets to enter the upper market segment and **INTEND TO THE CLOSE THE QUALITY GAP WITH THE INTERNATIONAL MARKET PLAYERS**. As a result, EAC comes to the conclusion that a **DUAL BUSINESS MODEL IS REQUIRED**:

1. It is of highest importance to **LEVERAGE OWN STRENGTHS** in premium segment
2. In parallel, the development of an **ADEQUATE PRODUCT PORTFOLIO** will secure successful penetration of mid-market segment

## KEY ELEMENTS OF DESIGN-TO-VALUE INITIATIVES

Design-to-value follows the clear target to offer customized product solutions to untapped market segments without sacrificing margin quality



### BUSINESS GROWTH

- Increase market share through exploiting competitive advantages
- Ensure sustainable and profitable growth in target market segments



### COST STRUCTURE

- Optimize cost structure using hidden potentials and local supplier capabilities
- Deliver right machines at adequate costs for focus markets and applications



### VALUE CHAIN

- Identify local value propositions that match company's regional footprint
- Rearrange value chain and shift value-add according to optimization potentials



### SALES SET-UP

- Identify customer values and specific requirements
- Localize sales and service infrastructure according to target customers and industries

## FACT-BASED DESIGN-TO-VALUE APPROACH

### 1. MARKETABILITY

#### SCOPE

- Segment-specific market understanding (differentiators from premium segment, size & development, margin quality, customer clusters)
- In-depth understanding of technical & commercial customer requirements and value drivers
- Competition analysis „best practice“ to identify own gaps and target cost position

#### PITFALLS

- Mid-market segmentation not clear due to lack of detailed data
- Limited field research to retrieve in-depth customer insights

### 2. TECHNICAL BENCHMARKING

#### SCOPE

- Detailed investigation of competitive products (segment leaders) and assessment of technical and functional differences and advantages
- Identification of optimization levers (specifications, materials, cost, etc.) and definition of product specification and development roadmap

#### PITFALLS

- Lacking transparency on segment leaders result in wrong product selection for benchmarking
- Different machine design philosophies (Europe vs. Asia) are not acknowledged adequately



## SUCCESS FACTORS ALONG THE VALUE CHAIN

### DEVELOPMENT

Design & development strongly driven by **LOCAL TEAMS** (not by HQ).

Clear match of customer & segment requirements with **TARGET COSTS**.

Consideration of evolving **INDUSTRY TRENDS** (e.g. Industry 4.0).

### SUPPLY CHAIN

Early involvement of suppliers to verify target **COST ASSUMPTIONS** according to specifications.

Continuous build-up and improvement of **SUPPLIER NETWORK** (differentiation from premium product suppliers).

Consideration of **LOGISTICS CONCEPTS** (means of transport, packaging).

### MANUFACTURING

Utilize **OUTSOURCING POTENTIALS** for processes (e.g. machining) & assembling.

Fast reach of **MANUFACTURING SCALES**.

Realize **QUALITY CONSISTENCY** - no sacrifice of defined functions.



### 3. TARGET COSTING

#### SCOPE

- Competitor cost benchmarking to derive top-down and bottom-up target costing (BOM-level and value chain steps)
- Specification of cost reduction measures (design change, make-or-buy, local sourcing potentials) to close identified cost gap with implementation timeline

#### PITFALLS

- Difficulties to retrieve and assess manufacturing cost parameters of competitive products (e.g. different cost allocation)
- Suppliers not involved early enough to verify target cost assumptions with actual RFQs

### 4. PRODUCT CONCEPT

#### SCOPE

- Systematic product development roadmap („Stage-Gate“ process)
- Continuous improvement of product specifications and functionality derived from „customer clinics“
- Definition of Unique Selling Propositions

#### PITFALLS

- Western clients still tend to „over-engineer“ with negative target cost impact (cross-functional/-regional frictions)
- New product concept not adequately tested with target customers

#### MARKETING

**DIFFERENT BRANDING** for mid-market products with clear separation from premium segment.

**PROMOTION EFFORTS** specific to new customer and application segments.

Clearly **DEFINED USPs** and addressing customers' „unmet“ needs.

#### SALES

**CLEAR SEPARATION** of sales resources for mid-market vs. premium products.

**INVOLVEMENT OF DISTRIBUTORS** to achieve required reach and to reduce own sales cost.

Leveraging e-commerce and social media as **SALES CHANNELS**.

#### SERVICE

Cost efficient **SERVICE INFRASTRUCTURE** and reachability for new customers in remote areas.

Outsource basic **SERVICE TASKS** to external partners & distributors.

Utilization of IoT-based tools to decrease internal **SERVICE COSTS** and for „predictive“ maintenance.

## EAC „DESIGN-TO-VALUE“ PROJECT CASE STUDIES

Successful project cases range from single components to complex machinery solutions with unique challenges and results



### MEDICAL EQUIPMENT

Significant feature reduction by translating „voice of customer“.

New development of machines for emerging markets (China and beyond).

Achieved cost saving of approximately 30% with exact match to required functionality.



### MACHINERY 1

Simplification of functionality, variations and operator interface.

Clear separation from established premium product (brand, channel).

Achievement of profitable add-on business.



### MACHINERY 2

New machine concept with reduced complexity and variances.

Successful access into new market segments and application industries.

30% cost savings through design adjustment and outsourced assembly.



### ELECTRICS

Re-design of technical and commercial product features.

Full localization of product development and manufacturing to China.

Achievement of > 50% cost saving vs. import landed costs.



### SEATING

New specification definition to fit functional requirements of target customer group.

Customer clinic confirmed product fit and acceptance.

Cost reduction of 35% through local product concept and localization.

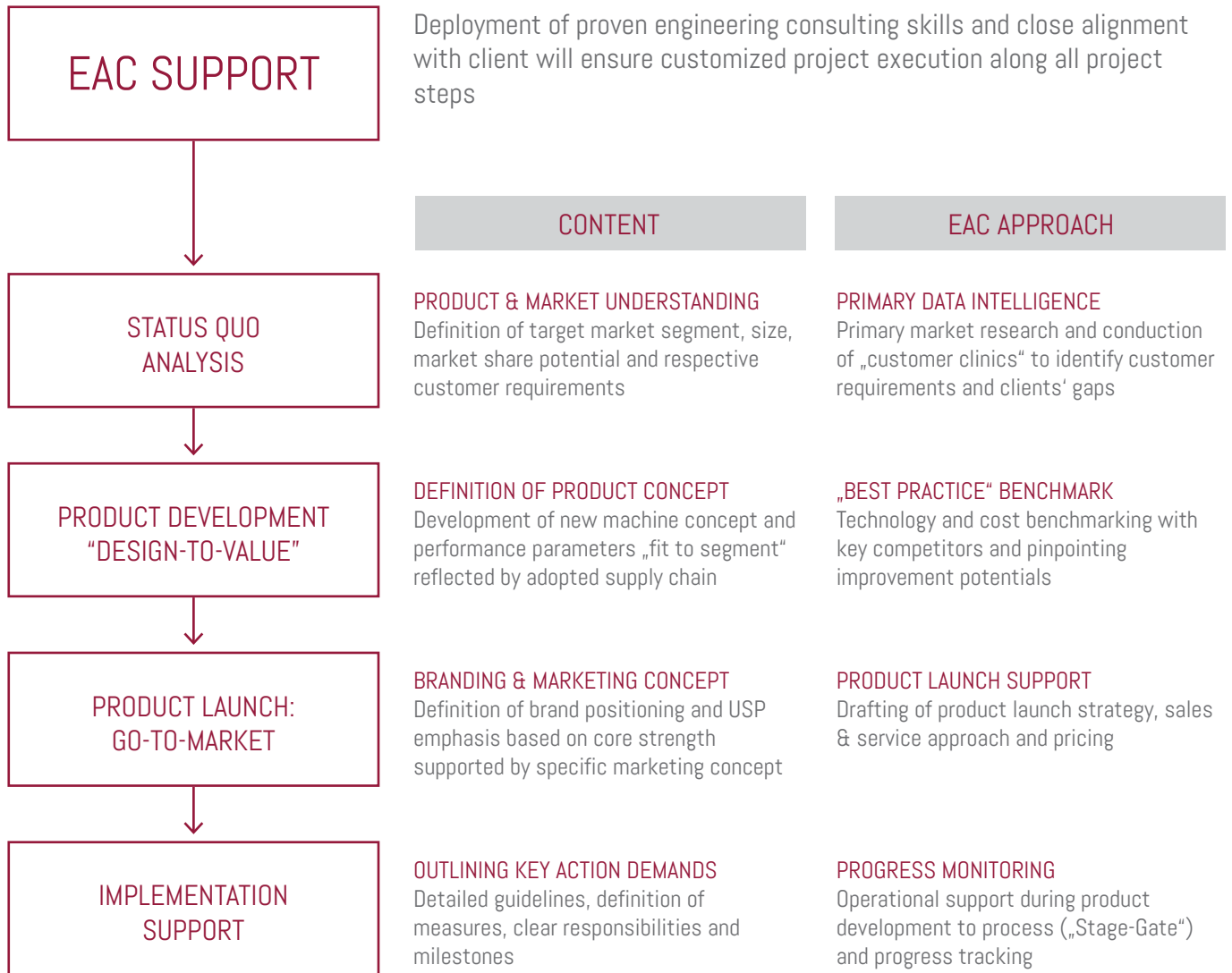


### GEARBOX

Re-design of heavy gearboxes to local market requirements.

Fulfillment of technical configurations compared to peers.

Significant reduction of price gap of 50%.



## EAC EXPERTISE AT A GLANCE

### FUNCTIONAL COMPETENCIES

STRATEGY  
M&A  
OPERATIONAL EXCELLENCE

> 80 EXPERTS

### OFFICES IN

MUNICH  
SHANGHAI  
MUMBAI  
MOSCOW

### EMERGING MARKETS

CHINA  
INDIA  
SOUTH EAST ASIA  
NORTH ASIA  
RUSSIA  
CEE

### INDUSTRY COMPETENCIES

MOBILITY  
INDUSTRIALS  
INFRASTRUCTURE  
ENVIRONMENT  
CHEMICALS  
HEALTHCARE  
CONSUMER GOODS  
ADVANCED TECHNOLOGIES

**YOUR LOCAL EXPERT IN EMERGING MARKETS SINCE 1992**





## EAC REFERENCES

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