Software development services

Individual HMI solutions

The best solution for every product

From a product vision to optimal HMI solution

Idea
Vision

Specification

Product
consulting

Check list

UniTFT
/eDIPTFT

It is your choice:
Programming by...

Your development department

Direct support from DV development department
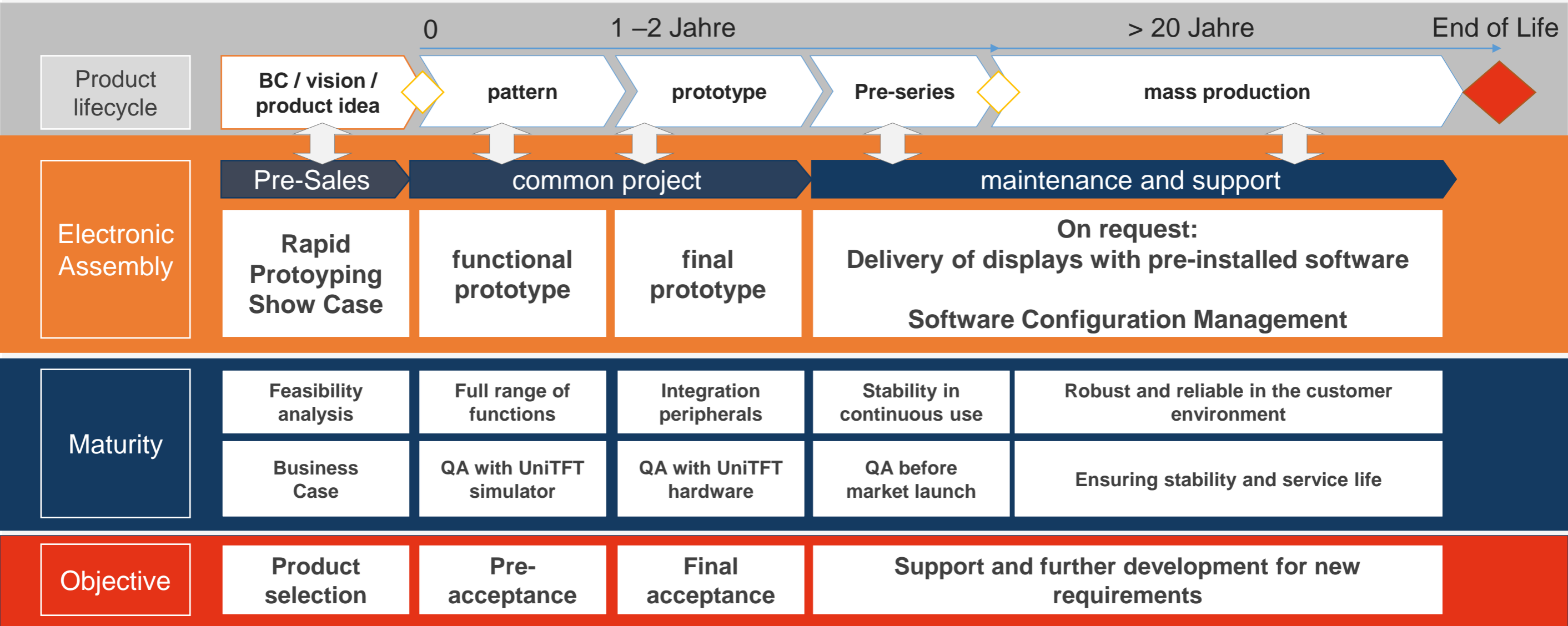
Your external service provider

DV development department supports external supplier

DV Software Services

We program the smart display up to mass production!

Customer

Display Vision (DV)

Benefits for customers

1	Immediately efficient		Avoidance of learning curves and, if necessary, repeated know-how building company in case of personnel changes.
2	Outsourcing strategy		Supports companies that already pursue an outsourcing strategy and want to concentrate on their core competence anyway.
3	Time to market		Accelerated implementation by product manufacturers up to series production.
4	Knowhow		You can always access the latest know-how from the manufacturer. With direct support for DV product development.
5	Cost efficiency		Programming the displays only one trade in the development of a new product and pre-installed software reduces production costs.
6	Quality		As a manufacturer, we are responsible for quality and guarantee the application of best practices in the implementation for stability and performance.
7	Availability		DV ensures the availability and maintenance of the software for the entire product life cycle in a secure long-term archive >10 years. Especially for certified products.

Services along the entire product lifecycle

Product lifecycle	0	1 –2 Jahre		> 20 Jahre	End of Life
	BC / vision / product idea	pattern	prototype	Pre-series	mass production

	Pre-Sales	common project		maintenance and support	
Electronic Assembly	Rapid Protoyping Show Case	functional prototype	final prototype	On request: Delivery of displays with pre-installed software Software Configuration Management	

Maturity	Feasibility analysis	Full range of functions	Integration peripherals	Stability in continuous use	Robust and reliable in the customer environment
	Business Case	QA with UniTFT simulator	QA with UniTFT hardware	QA before market launch	Ensuring stability and service life

Objective	Product selection	Pre-acceptance	Final acceptance	Support and further development for new requirements	

Selection of supported display types

Produkt ID	Größe
EA uniTFTs020-ATC	2"
EA uniTFTs028-ATC	2,8"
EA uniTFTs035-ATC	3,5"
EA uniTFTs043-ATC	4,3"
EA uniTFT050-A	5"
EA uniTFT050-ATC	5"
EA uniTFT050-ATP	5"
EA uniTFT070-A	7"
EA uniTFT070-ATC	7"
EA uniTFT101-A	10,1"
EA uniTFT101-ATC	10,1"

5" with PCAP
EA uniTFT050-ATC

7" with PCAP
EA uniTFT070-ATC

10.1" with PCAP
EA uniTFT101-ATC

Produkt ID	Größe
EA eDIPTFT32-A EA eDIPTFT32-ATP	3,2"
EA eDIPTFT43-A EA eDIPTFT43-ATP EA eDIPTFT43-ATC	4,3"
EA eDIPTFT57-A EA eDIPTFT57-ATP	5,7"
EA eDIPTFT70-A EA eDIPTFT70-ATP EA eDIPTFT70-ATC	7"
And all monochrome displays in the eDIP series	2,8" – 5,7"

Collaboration models

The right model for every customer situation

Specifications as a basis

Design and user interface	Product logic	Interfaces
• Mockups with all screen contents	• Functional description of the program logic in the form of use cases from a user's point of view	• USB • RS232 • I²C • SPI • Digitale I/O • Analog Output

Our service offering for you

• Optimized graphical interfaces with your CI • Flowcharts for program flow • Custom styles for reusing and recognizing your CI with your customers • Program code with naming conventions • Test and QA until final acceptance	• Software archive and Release Management • Support for multilingualism • Agile software development with regular review dates • On request: Joint digital project portal for online data exchange and collaboration

Delivery models

waterfal	Agile (SCRUM)	Display Visions Model
Fixed procedure with final acceptance test by customer.	Proper deliveries of running versions for intermediate acceptance.	Combines the advantages of the two traditional approach models.
It is recommended if there is a great deal of security and clarity about the desired range of functions at the beginning.	Better if you want to consciously set the range of functions dynamically.	Inclusion of mockup requirements and description of business logic with regular delivery of intermediates.

Waterfall model

Requirements → Technical concept → Implementation → Test and QA → Maintenance
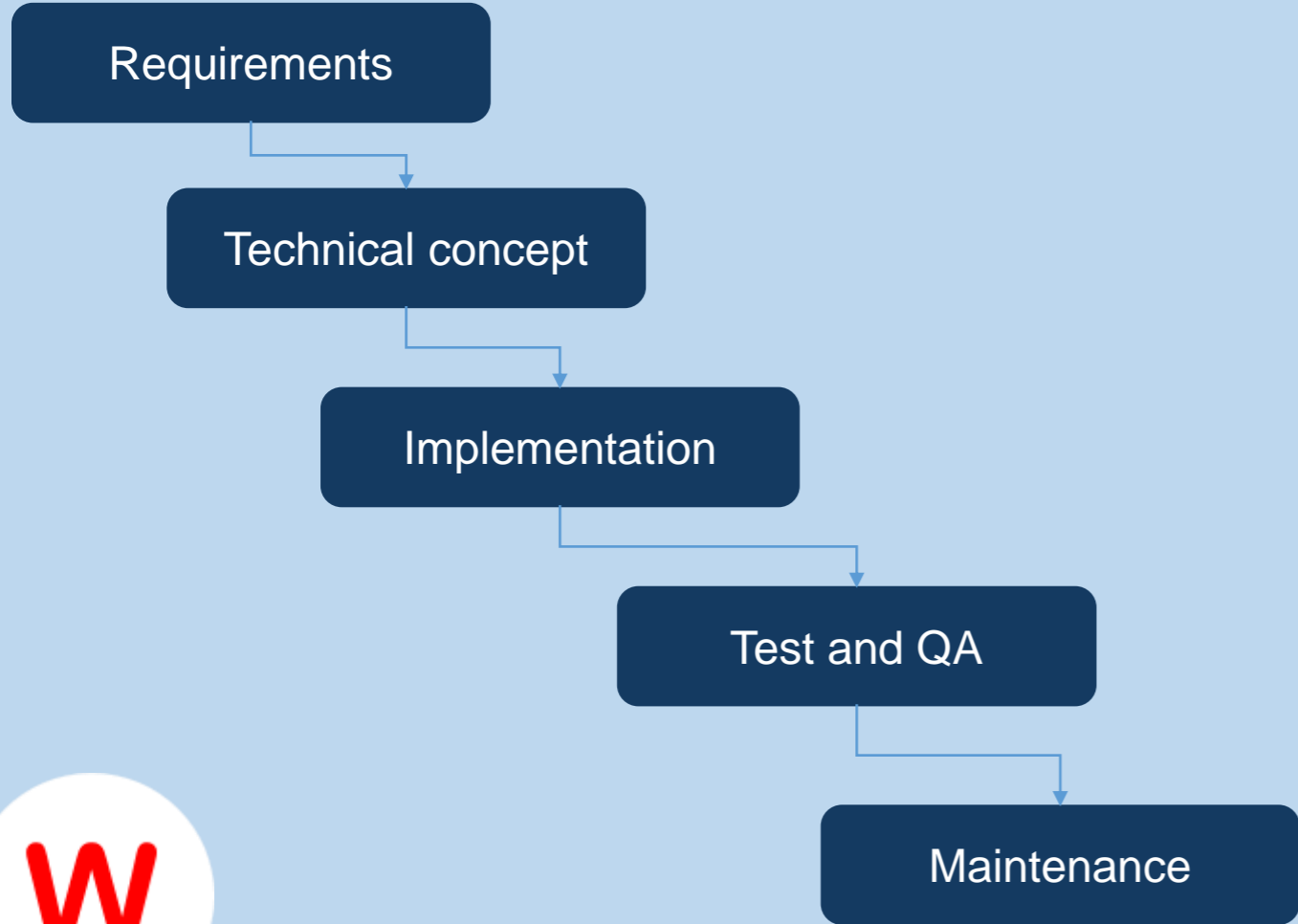
👍
- If requirements are already clear, complete and categorized
- Specifications will be elaborated complete in initial project phase: Specifications are available.
- Resource retention at customer primarily in the design and testing phase.

👎
- Greater risk that solution does not fit exactly in the result. Then greater re-work effort.
- In the early theoretical conception phase, practical influences are not taken into account.
- Customers can only test the software relatively late. Previously undiscovered follow-up errors are only later found in several test loops.
- Higher PM effort for change management for fixed-price projects.

Agile approach

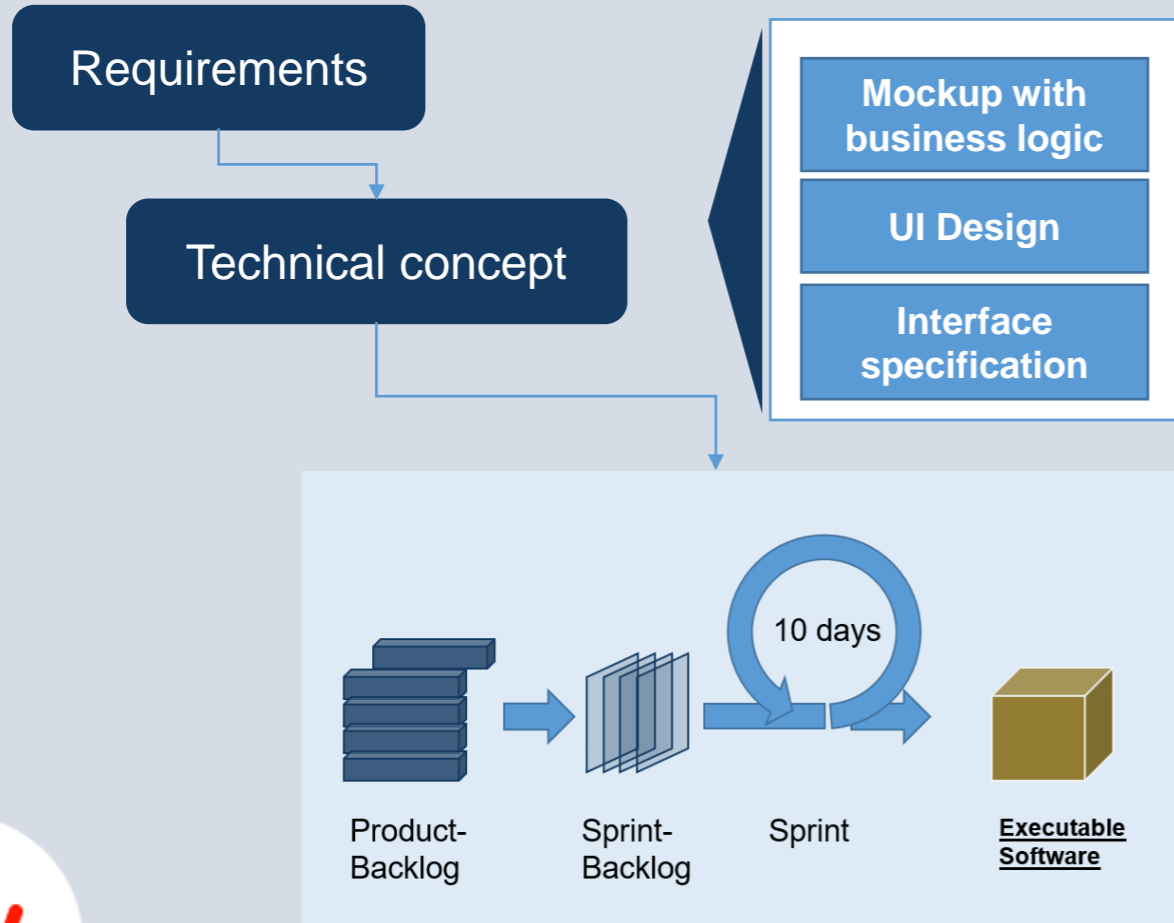Product-Backlog → Sprint-Backlog → Sprint (10 days) → **Executable Software**
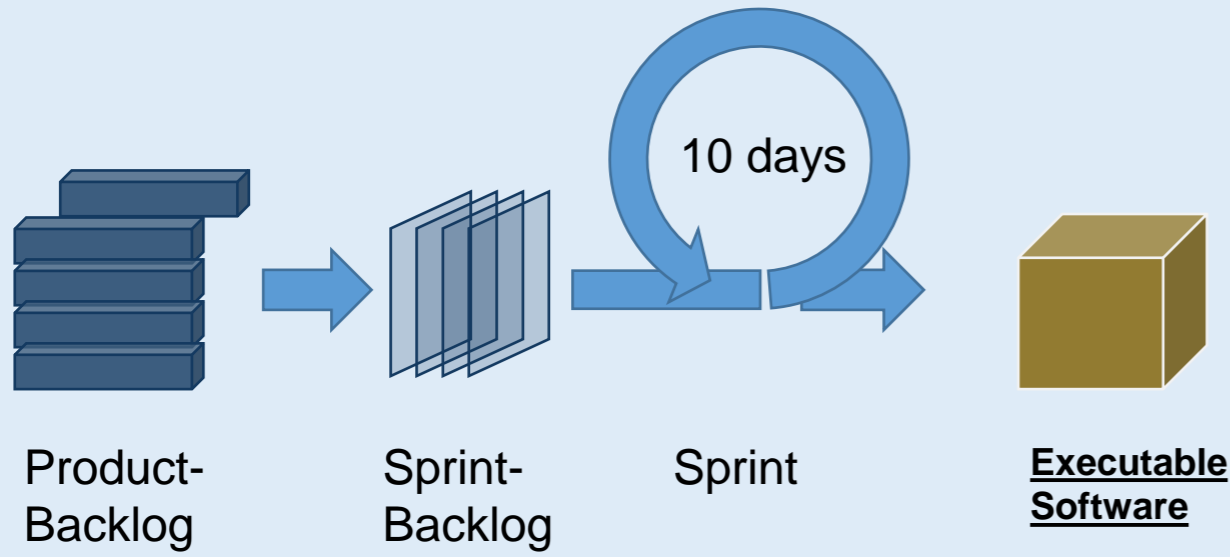
👍
- If there are no reliable specifications and clear requirements.
- The customer receives a running product for QA at short intervals.
- Clear prioritization by product managers possible.
- Software develops evolutionarily into the ideal solution in small steps.
- Easier cost management

👎
- Software that never finishes as product backlog continues to be supplemented with new requirements.
- Finished documentation only after completion development.
- No clear separation of the expenses for QA and bug fixing to development performance
- No fixed budget limit. Number of sprints not always given in advance.

DISPLAY VISION Model

- Requirements
- Technical concept
  - Mockup with business logic
  - UI Design
  - Interface specification

- Product-Backlog → Sprint-Backlog → Sprint (10 days) → Executable Software

👍
- Combines the benefits of both approaches and enables a design to budget approach.
- Customer always has full cost control.
- Very efficient requirements collection: Business logic linked to UI interaction avoids theoretical abstraction.
- Greater accuracy in project costs after concept phase.

👎
- Method is not suitable for small projects. Waterfall then rather useful.
- Greater customer involvement over the entire project life cycle.

Contract variants

	Character	Prerequisite	Collaboration model	settlement variants	
Service Contract	DV Delivers SW development team	-	W A DV	Monthly by actual effort per signed off time sheet	
Contract of work	EA delivers a software solution	Complete specification.	W	After approvals of defined payment milestones and supplements	Per display*

*In the case of contractually guaranteed minimum purchase quantity

Your contact person

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