



EVIDENCE BASED MANAGEMENT

Evidence-Based Management is a framework organisations can use to help them measure, manage, and increase the value they derive from their product delivery. EBM focuses on improving outcomes, reducing risks, and optimising investments. It is developed and sustained by Ken Schwaber and Scrum.org.

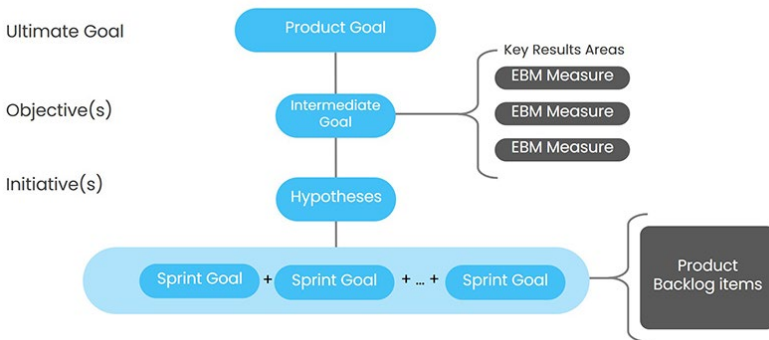
USING EBM

EBM is a framework that focuses executives and product managers on the outcomes and impacts of their initiatives by making value measurable and tangible.

While traditional metrics might give you insight into improvements of operational efficiency, the more important conversation is about improving your ability to create value for your customers and stakeholders.

Evidence-Based Management helps organisations put the right metrics in place to invest in the right places, make smarter decisions and reduce risk using an iterative and incremental approach. This empirical method alongside the agile principles and values enables successful steps of change for the organisation.

EBM looks at **4 Key Value Areas** that are compatible with enterprise KPIs and OKRs. All 4 areas contribute to an organisation's ability to deliver business value. These areas are: Current Value, Unrealised Value, Ability to Innovate and Time to Market.



EBM Cards are designed to support organisations to identify a range of metrics that help executives see early trends toward their goals, particularly in quarterly reviews for Product Managers and Product Owners at Sprint Review. A range of EBM Measures are recommended so that an holistic picture of progress is created – one that moves away from deliverable based milestones and one that truly represents value, impact and outcome.



CURRENT VALUE	CURRENT VALUE	CURRENT VALUE
Customer Usage Index	Product Cost Ratio	Customer Satisfaction (NPS)
Measurement of usage, by feature, to help infer the degree to which customers find the product useful and whether actual usage meets expectations on how long customers should be using a feature.	Total expenses and costs for the product being measured, including operational costs, compared to revenue.	Sentiment analysis to help gauge customer engagement and happiness with the product
CURRENT VALUE	CURRENT VALUE	CURRENT VALUE
Revenue per Employee	Employee Satisfaction	Stickiness
The ratio (gross revenue / number of employees) is a key competitive indicator within an industry.	Sentiment analysis to help gauge employee engagement, energy, morale and enthusiasm.	Stickiness helps you understand whether users value your product (i.e. whether they're returning or not) and is also an indicator of the growth rate of your business. $\text{Stickiness Ratio} = \frac{\text{Daily Active Users}}{\text{Monthly Active Users}}$
CURRENT VALUE	CURRENT VALUE	CURRENT VALUE
Knowledge Generation Volume	Customer Retention	Failures and Quality Issues
The relative percentage of time knowledge systems are used by the team to create new knowledge that supports an existing product or service to customers.	The percentage of customers that retain their service or product subscription month to month.	The percentage of repeat failures or quality issues that are identified month to month.

UNREALISED VALUE	UNREALISED VALUE	UNREALISED VALUE
Product Cost Ratio	Customer Acquisition Cost	Brand Perception
Total expenses and costs for the product being measured, including operational costs, compared to growing revenue.	Ratio of expenses and costs for the product, including operational costs, compared to the cost of creating the product.	Sentiment analysis to help gauge customer engagement and happiness.
UNREALISED VALUE	UNREALISED VALUE	UNREALISED VALUE
Customer Acquisition or Defection	Adherence to Customer Priorities	News Coverage
The ratio of customers defecting from the product to another.	The ratio of items teams work on that adheres to customer top priority characteristics	The ratio of market news and social media by competitors and their products compared to yours.
UNREALISED VALUE	UNREALISED VALUE	UNREALISED VALUE
Market Share	Customer Satisfaction Gap	Trials/Demos Requested
The relative percentage of the market controlled by the product.	The different between a customer's desired experience and their current experience.	The percentage increase of face-to-face customer engagement regarding potential new products

ABILITY TO INNOVATE	ABILITY TO INNOVATE	ABILITY TO INNOVATE
Time spent context switching	Installed Version Index	Product Incident Trends
Number of meetings per day per person. The number of times a day team members are interrupted to help people outside the team. Each interruption typically costs a person 20 minutes of lost productivity.	The number of versions of a product that are currently being supported. This reflects the effort the organisation spends supporting and maintaining older products.	The number of times the team is interrupted to address a problem with a product. The number and frequency of support incidents can help indicate the fragility or stability of the product.
ABILITY TO INNOVATE	ABILITY TO INNOVATE	ABILITY TO INNOVATE
Technical Debt	Innovation Rate	On-Product Index
The extra work that arises when a "quick and dirty" solution is implemented that will need to be remedied later. It creates an undesirable impact on the delivery of value and an avoidable increase in waste and risk.	The percentage of effort or cost spend on new products or capabilities divided by the total product effort or cost. This provides insight into the capacity of the organisation to deliver new products or capabilities.	The percentage of time teams spend working on product and value.
ABILITY TO INNOVATE	ABILITY TO INNOVATE	ABILITY TO INNOVATE
Active code branches	Time spent merging code between branches	Regrettable attrition
The number of branches of a product that are currently being supported. This reflects the effort the organisation spends supporting and maintaining active branches.	The percentage of time per day spent merging code between active branches.	The negative impact that an employee has on the organization when they decide to leave of their own accord $\text{Regrettable Attrition} = \frac{\text{\# employees left}}{\text{Total \# of employees}}$

ABILITY TO INNOVATE	ABILITY TO INNOVATE	TIME TO MARKET
Defect Trends	Feature Usage Index	Cycle Time
Measurement of change in defects since last measurement. A defect is anything that reduces the value of the product to a customer, user, or to the organisation itself. Defects are generally things that don't work as intended or work that returns and requires re-work to address.	Measurement of features in the product that are frequently used. This helps capture features that are rarely or never used.	The amount of time from when work starts until the point where it is considered Done. This measure helps reflect an organisation's ability to deliver value its customer.
TIME TO MARKET	TIME TO MARKET	TIME TO MARKET
Release Frequency	Mean Time to Repair	Time to Learn
The number of releases per time period. E.g. continuously, daily, weekly, monthly, quarterly, etc. This helps reflect the time needed to satisfy the customer with new and competitive products.	The average amount of time it takes from when an error or problem is detected and when it is fixed. This helps reveal the efficiency of an organisation to fix an error.	The total time needed to sketch an idea or improvement, develop it, deliver it to customers, and learn from how the product is then used.
TIME TO MARKET	TIME TO MARKET	TIME TO MARKET
Lead Time	Release Stabilisation Period	Build Integration Frequency
The amount of time from when an idea is proposed or a hypothesis is formed until a customer can benefit from that idea. This measure may vary from customer to product. It is a contributing factor for customer satisfaction	Time spent correcting product problems between the point the team say its ready to release and the point where it is actually released to customers. This helps represent the impact of poor work practices and underlying solution design.	The number of integrated and tested builds per time period. For a team that is releasing frequently or continuously, this measure is superseded by actual release metrics.

TIME TO MARKET	TIME TO MARKET	TIME TO MARKET
Batch Size Reduction	Reduced Unevenness (Mura)	Burden on the Work System (Muri)
Larger batches of work have greater variability and move more slowly to their conclusion. Reducing batch sizes is one way to improve the flow of work and speed up delivery.	Work items that are of similar size flow through work processes faster. Unevenness (Mura) is a form of waste.	Muri exists when people are utilised for more than 100% capability to complete a task or in an unsustainable way. Muri over a period of time can result in employee absenteeism, illness, and breakdowns of machines.
TIME TO MARKET	TIME TO MARKET	TIME TO MARKET
Over-production	Over-processing	Re-Learning
The percentage of time spent by the team doing work that doesn't contribute to the current work goal.	The percentage of time spent by the team doing work that exceeds the Done criteria. E.g. "Gold Plating"	The percentage of time spent by the team learning about new requirements and customer needs when a change is required.
TIME TO MARKET	TIME TO MARKET	TIME TO MARKET
Sprinting	Self-Organisation	Reduced Handovers
The strength of behaviours and agile mindset focussed on short work cycles	The strength of self-organising behaviours as distinct from management and task led activities. Self-organising teams are 15-20% more effective at achieving goals than management led teams.	The percentage reduction in gateway approval processes and downstream quality control steps outside of the team. Handovers are a form of waste.

WHO IS ZEN EX MACHINA?

Zen Ex Machina (“ZXM”) is the agile management consulting firm that the world’s business leaders come to when they want high quality results.

ABOUT ZEN EX MACHINA

Zen Ex Machina provides independent and objective consulting, founded in organisational psychology, culture and change management, to help leaders succeed in their organisations. Ranging in scope from a short strategy session to full agile business operating models, ZXM services connect you directly with world-leading, experienced, certified practitioners who apply expert insight to your specific strategic and operational challenges.

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