Business Model Canvas (BMC) — Detailed Handout

The Business Model Canvas (BMC), developed by Alexander Osterwalder, is a strategic management tool that helps visualize, design, and pivot a business model. It has 9 building blocks. Below is an explanation of each block with global and Pakistani examples, focusing on technology, engineering, and mechatronics.

1. Customer Segments (CS)

Who are the customers? For whom are we creating value? Customers can be mass market, niche, segmented, diversified, or multi-sided platforms.

Examples:

- Pakistani: Bykea targets commuters needing affordable transport & delivery.
- Global: Tesla targets eco-conscious consumers & tech enthusiasts.
- Mechatronics Example: Robotics startup serving factories (automation) + hospitals (surgical robots).

2. Value Proposition (VP)

What value do we deliver? What problems are solved or needs met? Can include performance, customization, cost reduction, risk reduction, or convenience.

Examples:

- Pakistani: Cowlar (smart collars for cows) improves dairy yield.
- Global: Boston Dynamics provides robots for hazardous environments.
- Mechatronics Example: Exoskeletons to reduce worker fatigue and increase efficiency.

3. Channels (CH)

How do we deliver the value to customers? Channels can be physical or digital.

Examples:

- Pakistani: Daraz.pk uses digital platforms + delivery.

- Global: DJI sells drones online and through distributors.
- Mechatronics Example: 3D printer startup sells directly to universities + online.

4. Customer Relationships (CR)

What kind of relationship does each customer segment expect? Options include personal assistance, automated services, communities, or co-creation.

Examples:
- Pakistani: Careem uses app-based support and loyalty rewards.
- Global: Apple provides Genius Bar support + community.
- Mechatronics Example: Robotics company assigns engineers for B2B clients.

5. Revenue Streams (RS)

How does the business earn money? Sources can include sales, subscriptions, licensing, or pay-per-use.

Examples:
- Pakistani: Airlift earned from delivery charges and brand partnerships.
- Global: Tesla makes revenue from cars, software, and energy credits.
- Mechatronics Example: CNC machine company sells machines + maintenance subscriptions.

6. Key Resources (KR)

What assets are essential for the business? Can be physical, intellectual, human, or financial.

Examples:
- Pakistani: Bykea relies on riders (physical), app (intellectual), and engineers (human).
- Global: Boston Dynamics relies on robotics patents, labs, and skilled engineers.
- Mechatronics Example: Drone delivery startup needs UAVs, AI software, and aeronautical engineers.

7. Key Activities (KA)

What must the business do to succeed? Activities may include production, R&D, problem solving.

Examples:

- Pakistani: Cowlar produces collars, updates IoT software, and analyzes dairy data.
- Global: DJI designs, manufactures, and updates drones.
- Mechatronics Example: Medical robotics company conducts trials and trains staff.

8. Key Partnerships (KP)

Who are the suppliers/partners that help deliver value? Partnerships can be strategic alliances, joint ventures, or supplier relationships.

Examples:

- Pakistani: Careem partners with restaurants (Careem Now) and banks (Careem Pay).
- Global: Tesla partners with Panasonic for batteries.
- Mechatronics Example: Robotics startup partners with manufacturers and universities for R&D.

9. Cost Structure (C$)

What are the major costs of the business model? Businesses may be cost-driven or value-driven.

Examples:

- Pakistani: Bykea spends on rider payments, app development, and fuel subsidies.
- Global: Tesla's costs include R&D, gigafactories, and raw materials.
- Mechatronics Example: Smart prosthetics startup spends on sensors, software, and clinical trials.

Block	Explanation	Pakistani Example	Global Example	Mechatronics Example
Customer Segments (CS)	Who are the customers? Who benefits from our product/service? Segments can be mass, niche, segmented, or multi-sided.	**Bykea** targets two main groups: everyday commuters who need affordable bike rides, and small businesses/customers who need fast delivery services.	**Tesla** focuses on eco-conscious individuals seeking sustainable transport, as well as early adopters who value cutting-edge technology.	A **robotics startup** designs automation robots for factories (to reduce labor costs and errors) and surgical robots for hospitals (to improve precision and outcomes).
Value Proposition (VP)	What problem are we solving? Why will customers choose us over alternatives?	**Cowlar** makes "Fitbit for cows." It increases dairy farm efficiency by monitoring cattle health, reducing disease risk, and improving milk yield.	**Boston Dynamics** provides advanced robots that can perform dangerous tasks in mining, construction, or disaster recovery — improving safety and efficiency.	An **exoskeleton suit** gives workers super-strength, reduces fatigue, and lowers the risk of injuries in heavy industries.
Channels (CH)	How do we deliver value to customers? Communication, distribution, and sales channels.	**Daraz** uses its app and website to reach customers, with logistics partners handling last-mile delivery across Pakistan.	**DJI** sells drones through its website, e-commerce platforms like Amazon, and authorized retail distributors worldwide.	A **3D printer startup** supplies products directly to universities via demo workshops and accepts online orders for individuals and makerspaces.

Customer Relationships (CR)	What kind of relationship does each segment expect? Personal, automated, community, co-creation?	**Careem** builds trust with customers through 24/7 app support, driver ratings, and loyalty programs.	**Apple** engages customers via personalized in-store support (Genius Bar), user communities, and premium after-sales care.	A **robotics integrator** provides personal assistance by assigning dedicated engineers to each factory client for setup, training, and maintenance.
Revenue Streams (RS)	How does the business earn money?	**Airlift** (before shutting down) generated income from delivery charges, brand partnerships, and premium service tiers.	**Tesla** earns from vehicle sales, paid software features (like autonomous driving), and energy credit trading with governments.	A **CNC machine manufacturer** sells machines upfront but also offers paid maintenance subscriptions and spare parts, ensuring recurring revenue.
Key Resources (KR)	What assets are critical to delivering value?	**Bykea's** resources include thousands of bike riders (physical), its mobile app and database (intellectual), and its team of developers/engineers (human).	**Boston Dynamics** relies on patented robotics technologies (intellectual), research labs and robots (physical), and robotics engineers (human).	A **drone delivery company** needs UAV hardware (physical), flight control AI (intellectual), and aeronautical/mechatronics engineers (human).
Key Activities (KA)	What must the business *do* to succeed?	**Cowlar** must design and produce IoT collars, update mobile apps, analyze animal health data, and support farmers.	**DJI** focuses on designing new drones, manufacturing at scale, and pushing	A **medical robotics company** must conduct clinical trials, achieve certifications, manufacture devices, and train hospital staff.

			firmware/software updates to customers.	
Key Partnerships (KP)	Who helps us deliver value? Suppliers, allies, or collaborators.	**Careem** partnered with restaurants for its food delivery wing and with banks/payment services for Careem Pay.	**Tesla** partners with Panasonic for batteries and with governments for EV infrastructure.	A **robotics startup** partners with local component manufacturers for parts and universities for joint R&D projects.
Cost Structure (C$)	What are the biggest costs? Fixed and variable costs.	**Bykea** spends on driver/rider payments, app development/maintenance, and marketing incentives like discounts.	**Tesla** has high costs in gigafactory operations, lithium procurement, R&D for new models, and marketing.	A **prosthetics startup** incurs costs in motors, embedded sensors, microcontrollers, clinical testing, and skilled staff salaries.