



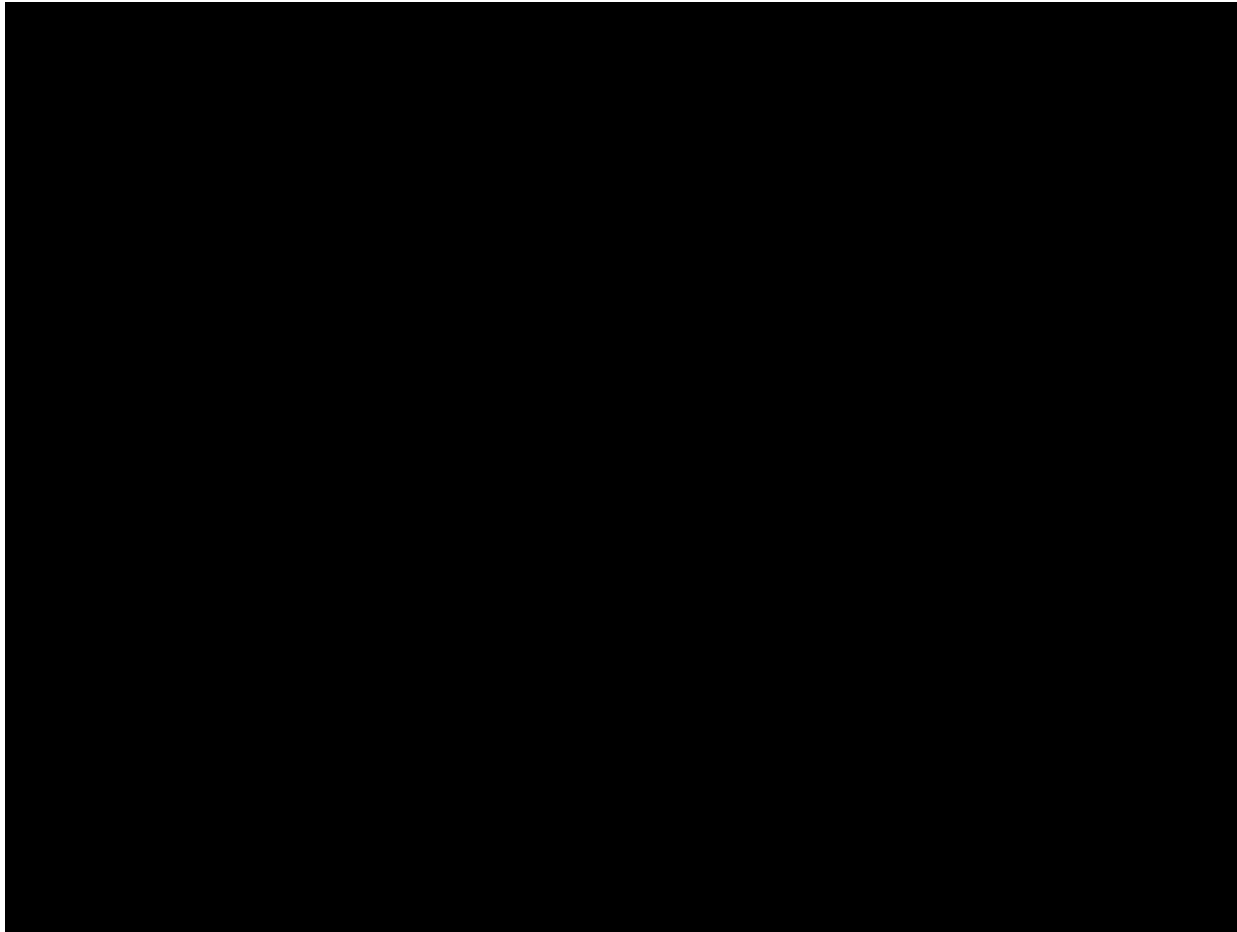
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## The future development of e-mountain bikes in Europe

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Bosch eBike Systems



# BOSCH eBIKE SYSTEMS












## Definition

- A **pedelec** (from **pedal electric cycle**) is a bicycle where the rider's pedaling is **assisted** by an electric motor. Unlike some other types of e-bikes, pedelecs are legally classified as **conventional** bicycles in many countries by road authorities, esp in EU.
- Pedelecs include an electronic controller which stops the motor producing power when the rider is not pedaling or when a certain speed – 25 km/h in EU, 20 mph in NA – has been reached.



## Pedelec Segments vs Bosch Product Lines

	Leisure/Commuting						Specific			
										
	20''/Folding	City	Trekking	Urban/Cross	ATB	MTB/Fully	Road	Cargo	Fleet	
Pedelec	[Blue bar]							[Blue bar]		
Speed-Pedelec			[Blue bar]							

Bosch offers tailored Drive Systems for different applications:

- Active Line → City / Tour / Trekking
- Performance Line → Urban / Terkking / ATB
- Performance Line CX → eMTB

## MY15 Bosch Product Portfolio for eMTB

### Performance Line CX

- Strongest assistance over all rpm
- Real ISIS-Interface
- Best-in-class Q-Factor
- Extra robust powder coating



### PowerPack 300

- Lightest battery 2,0 kg

### PowerPack 400

- Highest energy density (160Wh/kg)
- 2,6 kg weight



### Travel charger

- Charging on the way to your next ride



### 4A charger

- Fast, robust, silent
- Small & lightweight



### Nyon

- Fitness functions
- Manual altitude setting
- User-defined assistance modes customization

### Intuvia

- Intuitive and well-proven
- Off-Board use
- Walk assist



**Widest tailored product portfolio for eMTB!**



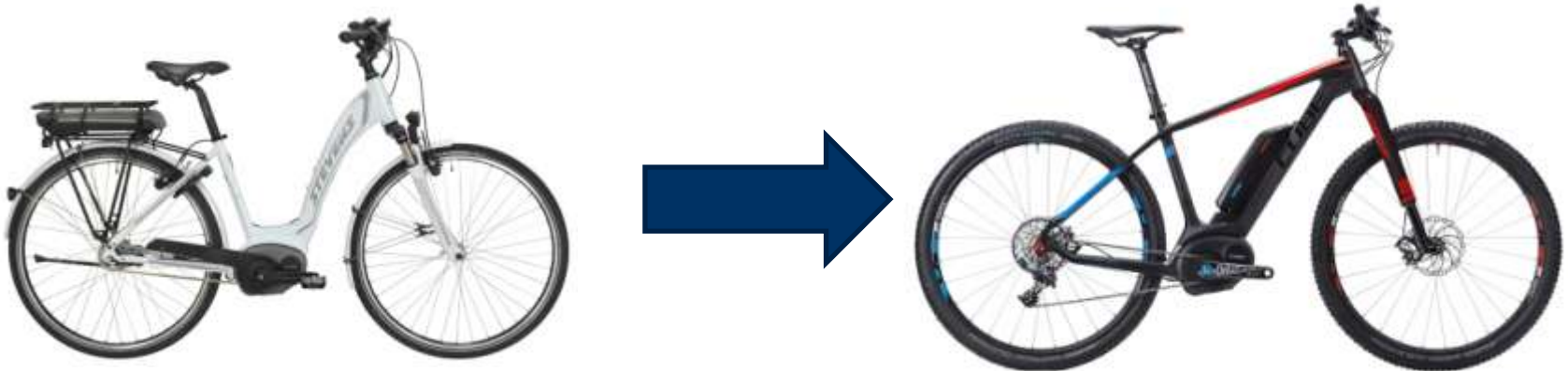
## Future use & target groups of e-mountain bikes.

- eMTB is currently a small segment but with the largest growth rate of all eBikes in EU
- like in MTB we expect largest segment in ATB / “normal MTB” (average spec, hardtail or medium suspension travel)
  - for tour and trekking on trails and gravel roads
- some very sportive eMTB with All Mountain/Enduro style spec
  - single trails, flow trails

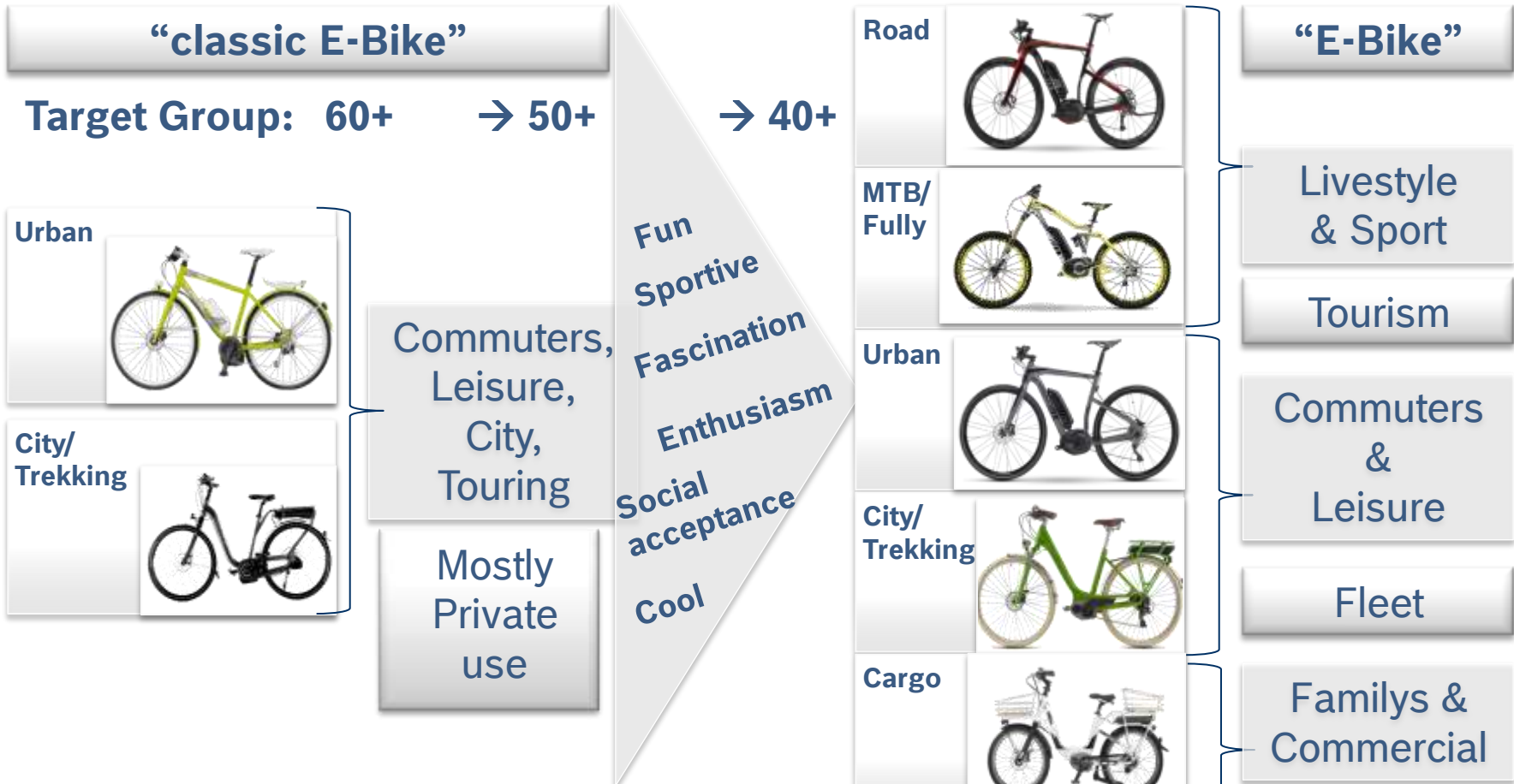


## Which age category buys e-mountain bikes ?

- Age class moved from 60+ to 30+
- 50+ and 60+ buy eMTB because of the cool looks and image
- 30+ and 40+ because of the riding performance
- Younger riders like the fun aspect of the power on trails



## Pedelec: Trend in all Segments



**Pedelec: All bike types are electrified !**



## Anti Tampering

→ Bosch and the Industry work on a “Code of Business Conduct to prevent from illegal tampering (Tuning)”



### Key messages:

- The eBike industry is strictly against tampering
- eBike industry will create a high level of awareness for all stakeholders e.g. dealers, consumers, authorities
- The ebike industry actively discourages the distribution chain to support tampering (contracts, legal measures...)
- Contracting with dealers to include a code of conduct.
  - No distribution of tuning kits / no manipulation of the system to increase to the speed etc.
  - Training and information about the consequences of violation of the code of conduct
- eBike Industry will team up with dealer / cycling organizations to discourage dealers and consumers from tampering
- The ebike industry offers education to discourage dealers and users
- eBike industry is willing to cooperate with police authorities how to identify speed ebikes and how to identify manipulation

## Will e-mountain bikes change the mountain bike sport?

- Bosch sees eMTB as the logical continuation and addition to the MTB in recreational sport for the average cyclist



## Will there be e-mountain bike categories at competitions?

- The new eMTB categories in MTB racing (German Masters, 24h Rad am Ring etc.) are an evidence and proof for the acceptance



## Is additional instruction / skills training needed for safety reasons?

- eMTB is a human powered bike sport if we limit the E-power to the EU level (250 W, 25 km/h)
- speed on even or downhill trails is the same; the power helps on moderate and steep uphill trails
- only for technical sections the MTB training might be upgraded to eMTB due to the added weight and for uphill climbing



## What is the attitude of other recreational trail users (hikers etc.) and land managers towards the use of e-mountain bikes?

- The initial reaction of MTB cyclists and purists was: "this is cheating, this is wrong!"  
→ this seems to no issue anymore in the EU
- As long as the EU-definition of eBikes (25 km/h, 250 W) is respected, any eMTB is rated as a MTB bicycle
- As of today, hikers and landmanagers in EU do not differentiate between MTB and eMTB
- MTB and eMTB face the same trails access discussions

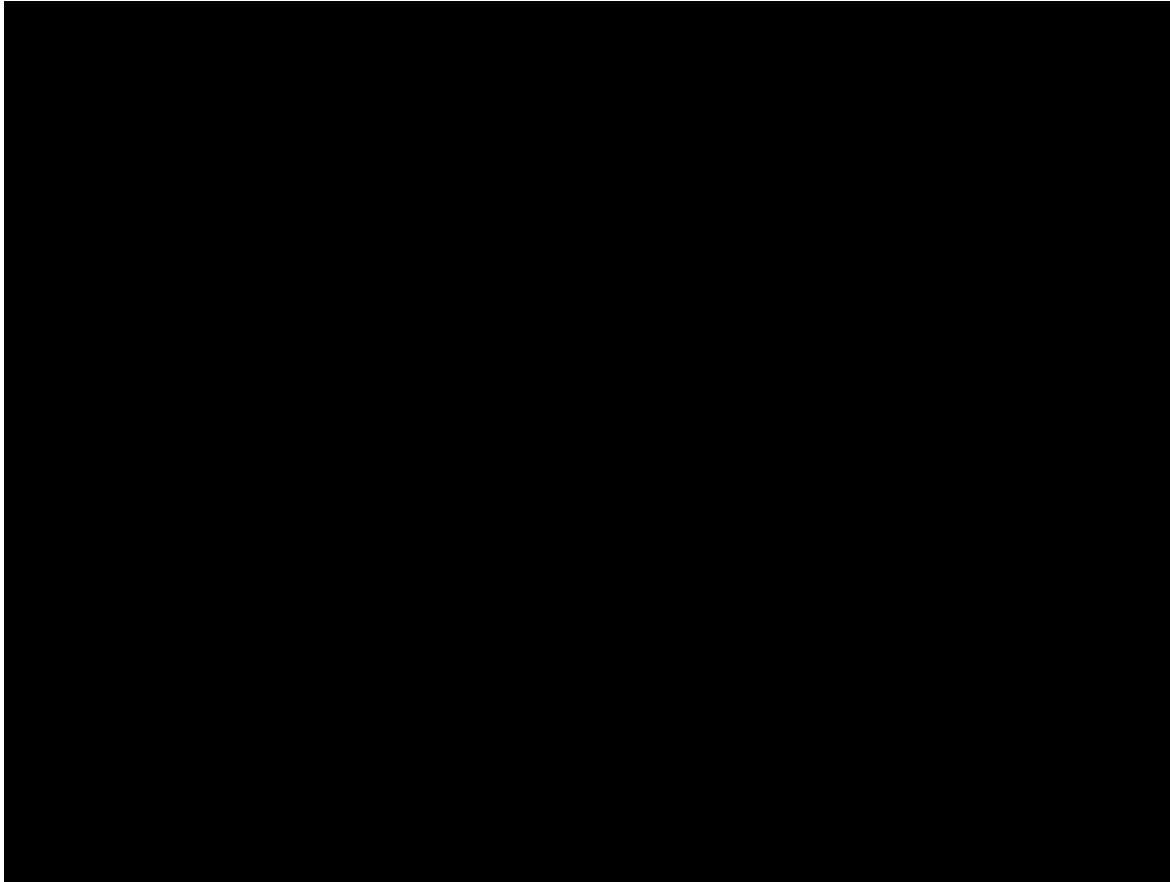


## Acceptance might change, if we do not act and prevent:

- Bosch promotes “eMTB is equal to MTB” in terms of use case, utilization, rights & duty, and responsibility
- Bosch promotes “eMTB” in a responsible way (2014 video “Uphill Flow”)
- “Uphill Flow” part 2 will be produced in Spring 2015 in the Alps to show technical training, riding skills, guided tours of “average MTB tourists”
- Bosch appreciates the DIMB and IMBA initiatives and respects & promotes trail etiquette



## Bosch: Uphill Flow



## Bosch Promotion regarding eMTB

- Bosch believes that eMTB is a reasonable and positive addition to the MTB
- „Bike more, bike longer (age & duration), have more fun on your bike!“
- Positive addition to the sport: First eMTB races prove this!
- **Trail Etiquette is very important !!!**







## THANK YOU FOR YOUR ATTENTION!

Automotive Electronics

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