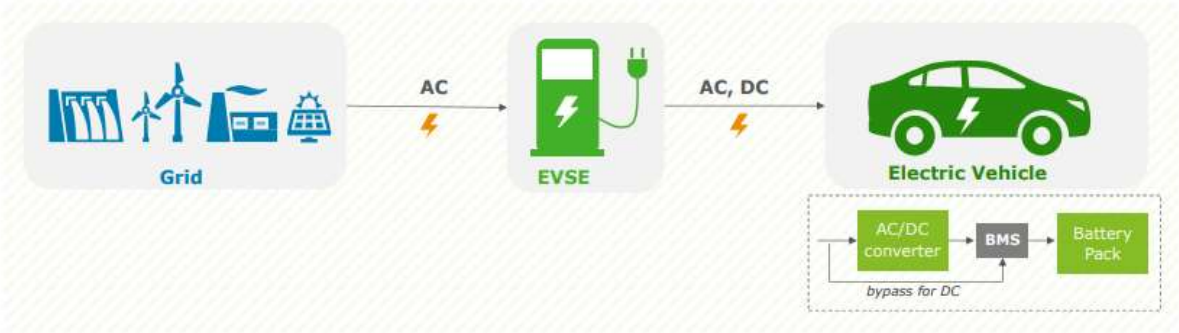


ELECTRIC VEHICLE CHARGING BUSINESS

22.05.2022

Your Name

SREENIVAASAN G

CSE(IOT & AUTOMATION)

1st YEAR

SASTRA UNIVERSITY

ELECTRIC CHARGING BUSINESS

INTRODUCTION:

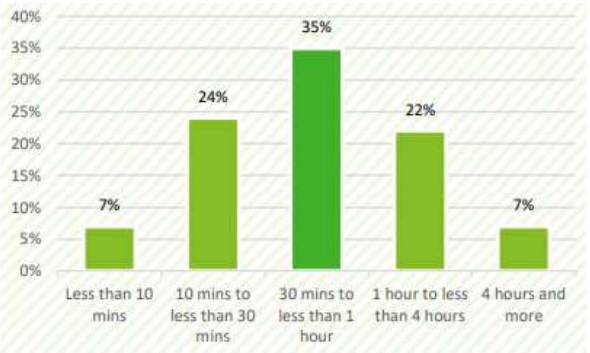
Gas stations sell gasoline to drivers and make profit. But Electric vehicle charging stations are entirely different.Still now many companies face little loss in this field still there are other ways to get more profit in this business field.

WHY DIFFERENT :

Electric vehicle charging businesses are entirely different because we can fill our tank with gasoline within a few minutes but electric vehicles need more time to charge its battery and in this speedy world everyone needs everything to be over within a second.So the EV owners need to wait until their vehicle gets full charge.

Figure 95 Minimum driving range consumers are expecting from a BEV (km)

Figure 96 Amount of time consumers are willing to wait for full EV charging



A census says most EV owners expected to do their charging overnight at home. There are four level of charging stations and they are listed below in the table.

Charger Level	Typical power rating (KW)	Example installation	Charge Time for 100 Miles Range [1,2]
1	1 KW	▪ Standard electrical outlet in a domestic garage	20 hours
2	5 KW	▪ Specialized domestic charging apparatus (often sold as optional extra with vehicle or supplied by specialist third parties) ▪ Workplace parking lot installations ▪ Public access charge points at retail stores, parking lots, etc.	4 hours
3	80 KW	▪ Specialized fast chargers designed for users “on the go”	40 mins
4	120 KW	▪ Ultra-fast chargers for users on the go ▪ To-date installed by vehicle OEMs as proprietary support for their customers or owners	25 mins

The above table clearly shows how much time it takes for an EV vehicle according to the power rating in KW.Also the cost required to set up the power station will be very high.But there are some ways to profit in this field.

HOW TESLA SURVIVES BUT OTHERS ? :

Important thing here to note Testla is the first to introduce a supercharging network and they made it for free.By this way they increased the TESLA users and after getting more users they charged a rate of 25 to 30 cents/kwh and also allowed TESLA users to use their stations.

But other companies only meant for EV charging involved other strategies to increase their profits .Their only aim is to target non-homeowners(Middle class people) , long travelers ,public places, office workers

They constructed their 50-80 KW Level 3 charging points in

1. Hotels
2. Shopping mall

And Level 2 charging points near :-

3. Offices
4. Parking lots(Long hours stay)
5. Boarding Lodges

To get profit.Low current charge points are used in offices and parking lots as the vehicles will be kept for long time. This masterminded strategy greatly helped them to get little profit.We mentioned the profit as little because still now there are EV less users.

HOPE :

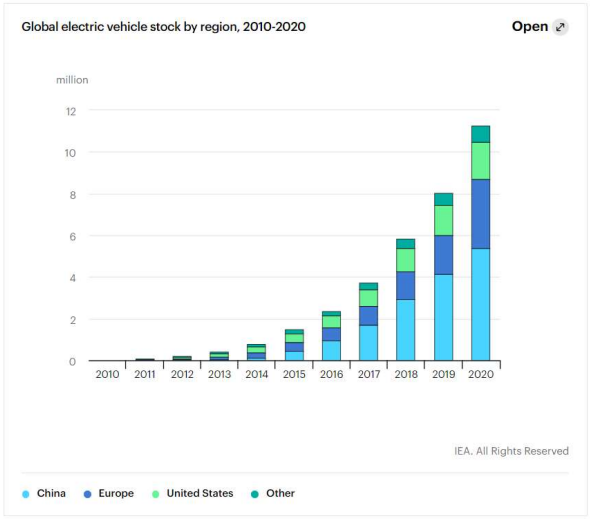
According to last year's census there were 10 million electric cars on the world’s roads at the end of 2020, following a decade of rapid growth. Electric car registrations increased by 41% in 2020, despite the pandemic-related worldwide downturn in car sales in which global car sales dropped 16%. Around 3 million electric cars were sold globally (a 4.6% sales share), and Europe overtook the People’s Republic of China (“China”) as the world’s largest electric vehicle (EV) market for the first time.

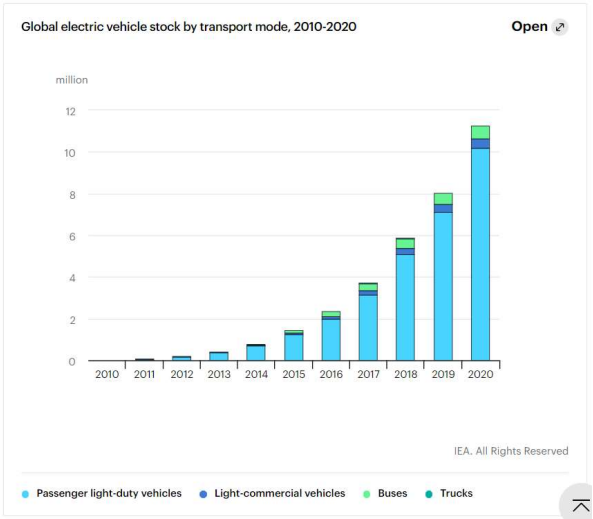
Consumer spending on electric car purchases increased to USD 120 billion in 2020. In parallel, governments across the world spent USD 14 billion to support electric car sales, up 25% from 2019.

The near-term outlook for EV sales is bright. In the first-quarter of 2021, global electric car sales rose by around 140% compared to the same period in 2020, driven by sales in China of around 500 000 vehicles and in Europe of around 450 000. US sales more than doubled relative to the first-quarter of 2020, albeit from a much lower base.

Existing policies around the world suggest healthy growth over this decade: in the Stated Policies Scenario, the EV stock across all modes (except two/three-wheelers) reaches 145 million in 2030, accounting for 7% of the road vehicle fleet.

EV markets could be significantly larger if governments accelerate efforts to reach climate goals. In the Sustainable Development Scenario, the global EV fleet reaches 230 million vehicles in 2030 (excluding two/three-wheelers)





In the case of India , people started to switch to electric vehicles due to the high cost of non renewable resource fuel and to promote EV sales Indian Government gives many subsidies to EV companies and they confirmed that within a few years even middle class people can also buy EVs.

Figure 60 Total EV charging stations in India - 2020

Figure 61 Share of Charging point operators

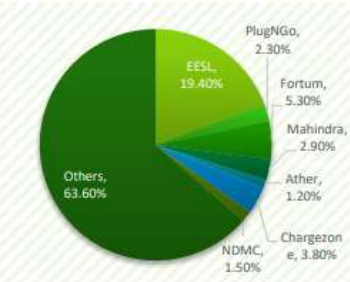
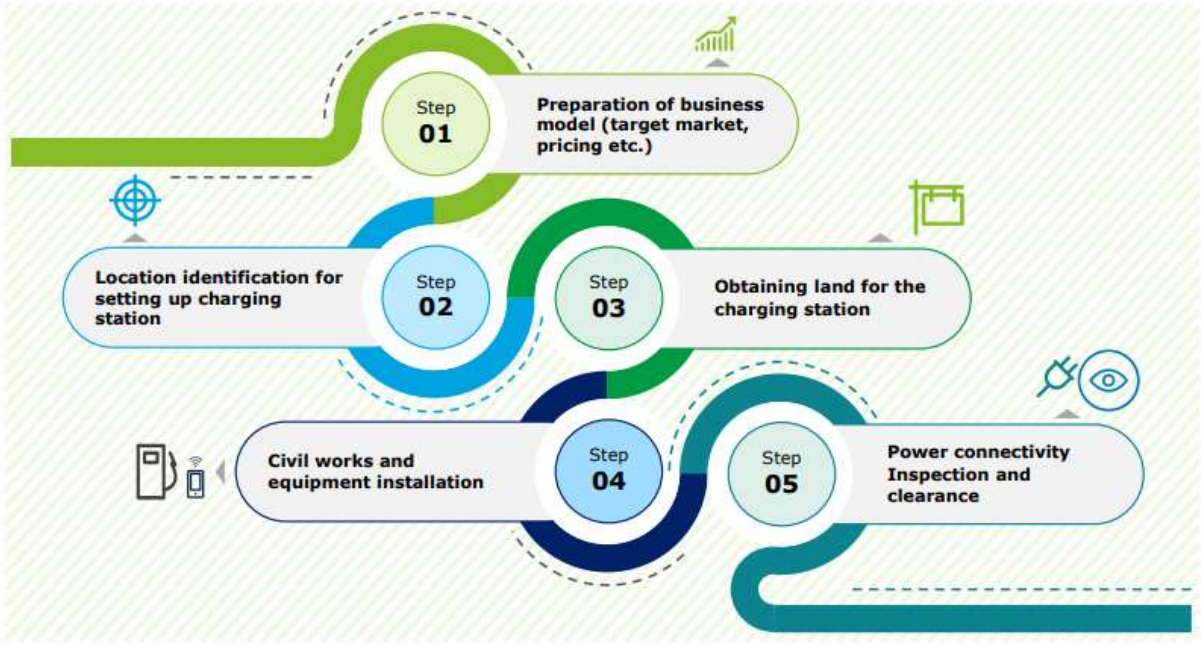


Figure 62 Charging stations awarded by DHI under FAME – II Scheme

So within few years in collaboration with renewable resource like solar panels EV charging business will become one of the top profitable business in the world.

Figure 67 Process of setting up an EV charging infrastructure



ELECTRIC CHARGING BUSINESS WEBSITES INSPIRED ME

1.RWE: https://www.rwe.com/en

Exceptional web design ! Auto playing of video attract me a lot !! Also the zoom effect when we hover those topics suits well. Well I could those hover effect , sticky navigation bar , auto playing of video also that picture sliding animations myself.

8

RWE's career world

Professionally experienced, graduate, student or pupil?

Discover opportunities

RWE as an employer

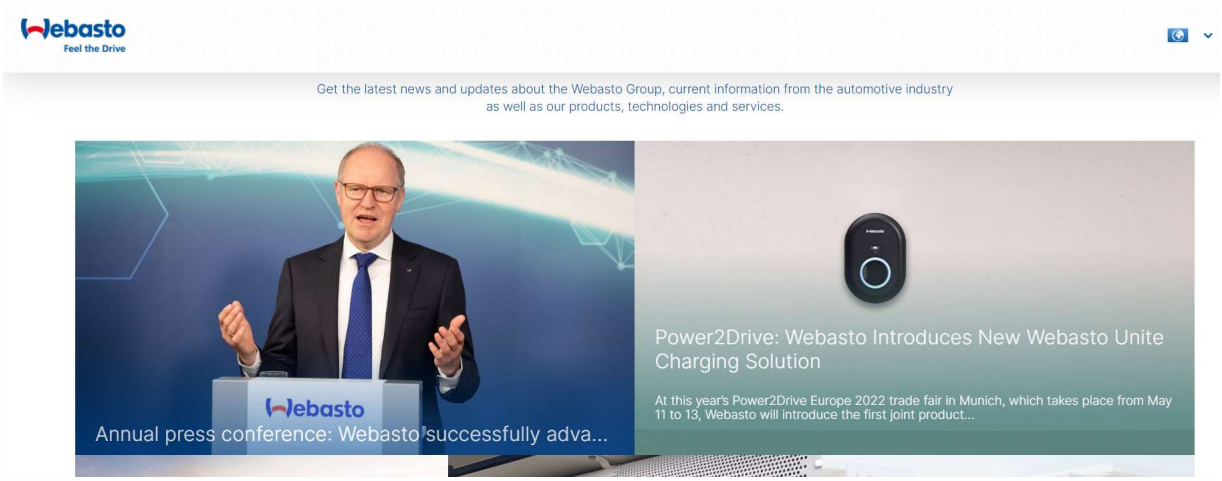
Fulfilling tasks, esteeming benefits, colleagues being there for you: That is what sets us apart.

So why RWE?

2.WEBSTRO: https://www.webasto-group.com/en/

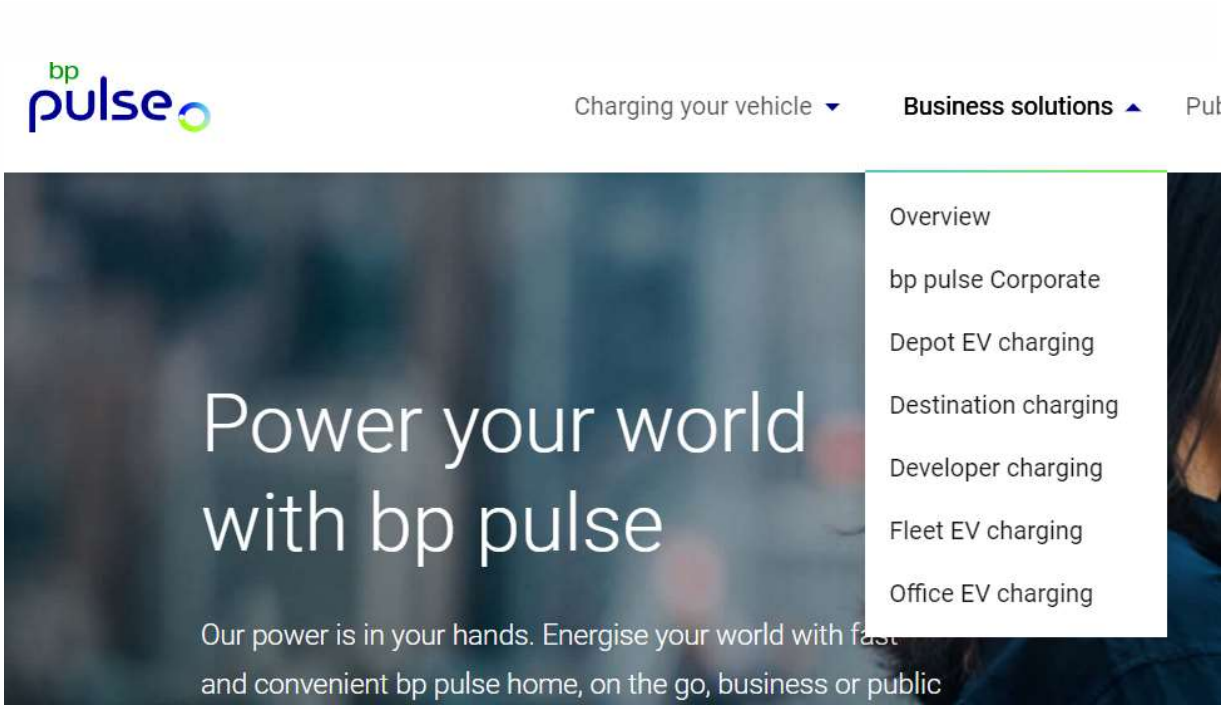
Sliding animation and and the animations which makes the words to come up when we click those news images are eye catching . Smooth website with clear explanations about the specific topics. It will be easy to do that hovering animation in our website as I have done it before in my website which is in my

portfolio of my Internshala profile. Also I will do that image sliding animation too.



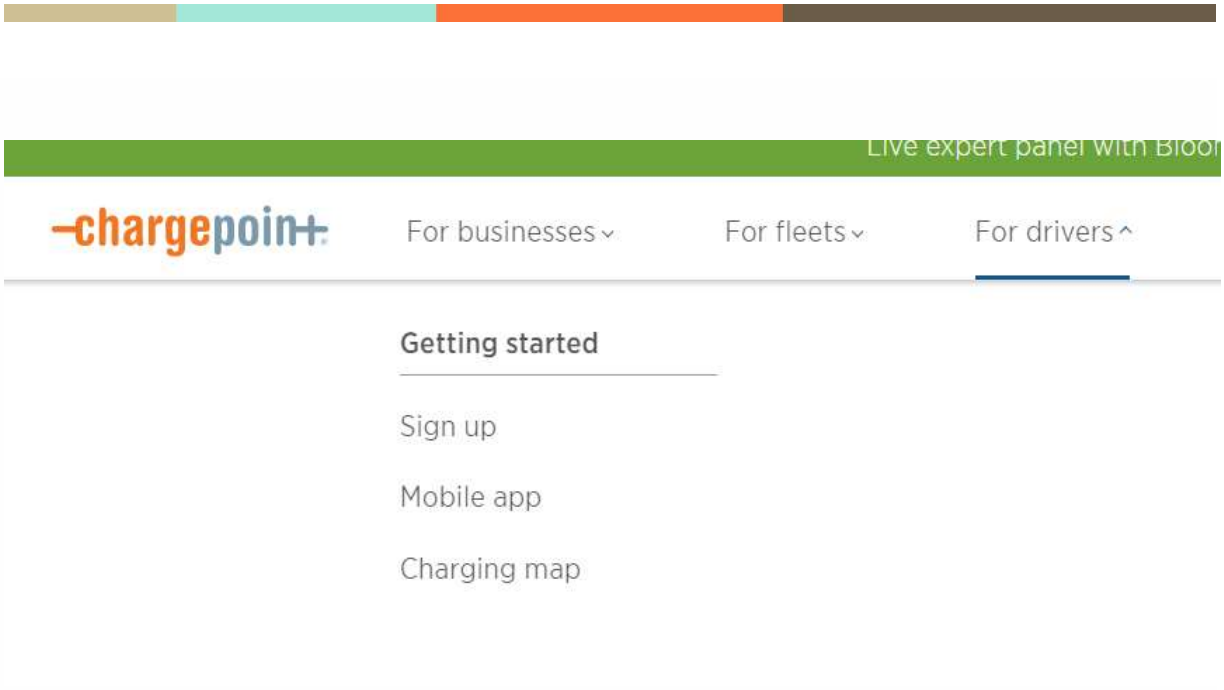
3.BP PULSE: https://www.bppulse.co.uk/

Smooth navigation bar in which the green color underline follows the topic to which we hover and the colorful images with white background adds extra interest to explore this website! Looks very attractive !! Pretty cool responsive website ! I could navigation bar similar to this website



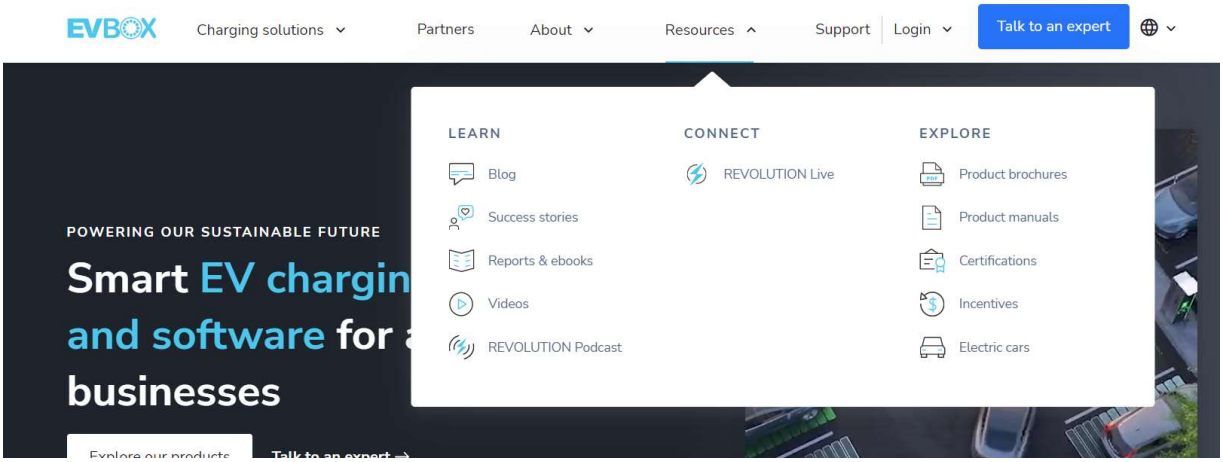
4.CHARGE POINT : https://www.chargepoint.com/en-gb

Neat and clean website . Navigation bar is very fine and alignment of subtopics under their respective topics looks good. They are one of the companies who have largest network of electric vehicle charging points across the world still their website is very simple . I would make a website similar to this one especially their navigation bar.



5. EV BOX : https://evbox.com/en/

Fantastic navigation bar design and perfect color selection to the website . Excellent responsive design and the animation which changes the color of the boxes when hover it was cool. I could do this animations and I will try do make navigation bar similar to it.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THANK YOU