Vidya Vikas Education Trust's
Universal College of Engineering
Kaman - Bhiwandi Road, Vasai, Maharashtra
Accredited with 'B+' grade by NAAC, approved by AICTE, DTE
Recognised as Gujrati Linguistic Minority

The Official Newsletter of Dept. of ETRX, UCOE
SEPTEMBER VOLUME 4, EDITION 3

ELECTROBUZZ

College Profile

Everything you need to know about us.

Embraced by lush greenery and scenic beauty, Universal College of Engineering is a treasured place for aspiring engineers to leave their imprints towards success.

As a college within the wider network frame, we are one of the fastest growing institutions in India. Our institute has been accredited by National Assessment and Accreditation Council (**NAAC**) with **B+ grade** in the first cycle of accreditation. Times of India Survey **Ranked No. 1** in India among Top Emerging Private Engineering Institutes for 6 consecutive years 2015, 2016, 2017, 2018, 2019 and 2020 and the saga of accolades still continues.

In response to the expectations of quality technical education, our college is approved by the All India Council for Technical Education (**AICTE**), New Delhi; recognized by the Directorate of Technical Education (**DTE**), Government of Maharashtra; affiliated to Mumbai University.

Our college is also associated with professional bodies like IEEE, IETE, ISA and CSI to update the revolutionary technological advancements.

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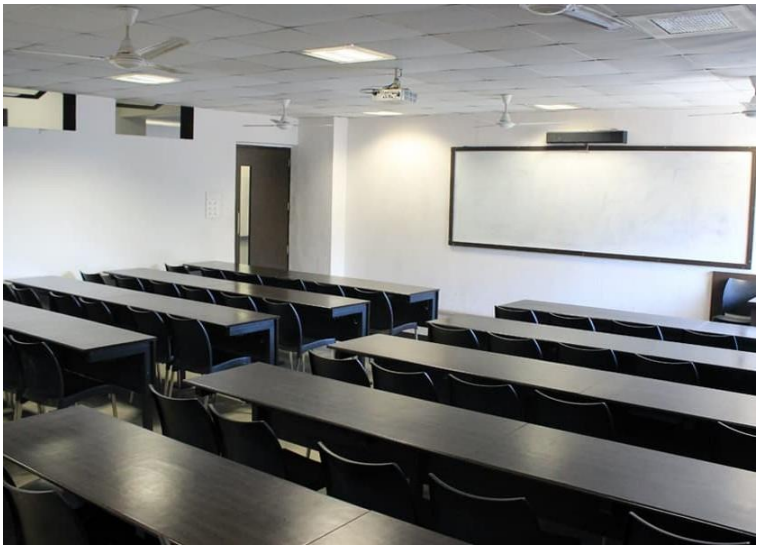
We offer 4 years full-time Bachelor of Technology in Computer Engineering, Civil Engineering, Artificial Intelligence & Machine Learning, Information Technology Engineering and Data Engineering.

The unique state-of-the-art facility of the institute has been carefully designed to accommodate the needs of the students. Laboratories are equipped with world-class facilities based on the latest technology of different sectors. Our smart classrooms are well ventilated, spacious and equipped with overhead and LCD projectors along with the public address system. College library provides a rich collection of specialist library resources and services to support students' academic work and enrich their research skills.

We are obliged to equip our students to get placed in highly reputed companies by mentoring their necessary skill set for cutting-edge technologies. The core highlighted areas are helping students with their technical competency, communication skills along with career guidance and counselling.

Universal College of Engineering has produced a large number of successful alumni who are working in reputed organizations in India and abroad and have contributed immensely to the cause of nation-building and society. We welcome all engineering aspirants to create an incredible legacy in the field of engineering.



Is Amazon entering the agri-tech space?

In today's Finshots we see why Amazon may be flirting with the idea of venturing into the ambitious farm to fork business

Business

The Story

Amazon is foraying into the agri-tech space. According to one article in the Print - *"The Seattle-headquartered giant has begun offering real-time advice and information through a dedicated mobile app to help farmers make decisions on crops and even deploy machine learning technology. The program — which Amazon dubs Reactive and Proactive Crop plans — promises to provide growers with cutting-edge technology and insights."*

If anything, this seems to be a formal foray into the farm to fork business — an attempt to bring fresh produce to bring fresh produce to your doorstep. And while it may feel like this move was long overdue, there is a whole host of problems any entity will have to deal with when trying to make a dent in this space.

After all, we aren't just talking about some random commodity here. We are talking about agricultural produce.

Consider for instance the big problem — Seasonality.

Most crops aren't grown throughout the year. We have dedicated windows for sowing and we have dedicated windows for harvesting. On most occasions, a bountiful harvest keeps everyone happy. There's

enough produce going around and nobody has to worry about supply disruptions. But when you get to the lean periods — when you're waiting for the next harvest to come through, you may have a problem on your hands. You may have to contend with the shortage. And the only way to alleviate this problem is to build storage facilities.

Because if you can't store the produce, you're more likely to have a mismatch in demand and supply. And if you can't plug this mismatch, you'll have trouble fulfilling customer orders.

This problem is more apparent when you're dealing with perishable products — fruits and vegetables — something Amazon has already been dabbling with for a while.

Before dispatching the produce to processing centers, Amazon has to inspect and monitor quality at various stages. And they have to make sure the produce stays fresh throughout this journey. For instance, Amazon's fulfillment centers operate with 4 separate temperature zones (ambient, tropical, chilled, and frozen) to maintain the quality and freshness of produce.

And if you're thinking we're done here, oh no, we are only getting started. Storage and cold chain infrastructure might do the trick for a while. But running this business at scale would mean going back to the roots.

You have to talk to the farmers. You have to have agreements in place to produce and supply fruits and vegetables of the desired quality. But even the most well-intentioned farmers may not be able to follow through with their promise. They're often at the mercy of monsoons, pests, droughts, and other such factors. So if you really want to predict both the quality and quantity of your produce, then you have to partner with them as they head into the sowing season.

You'll have to hand them quality seeds, advise on best practices, and maybe even finance their operation. You'll have to handhold them through rough monsoons and dry weather. You'll have to teach them the way. Only then can you finally start making progress.

This finally brings us to the story today. Amazon may have big ambitions to dominate this sector through their Amazon Fresh offering. But to be able to succeed in this endeavor, they have to fix the broken supply chain just like everyone else. They'll have to work with farmers, with other intermediaries, and even with the government if they are serious about this thing.

So while the mobile app may be a good place to start, Amazon can only make meaningful progress once they start getting their hands dirty alongside the farmers.

The case of the disappearing camel

In this newsletter, we talk about why the camel population is on the decline.

Yes, camel population :)

Policy

The story

India's camel population is dwindling. Take for instance this excerpt from an article in National Geographic — *India's total camel population — all of them descendants of the wild dromedary, or Arabian, camels — decreased by 37 percent between 2012 and 2019, according to the latest count, the 20th Livestock Census, published in 2019. Current estimates suggest that there are fewer than 200,000 camels left among the nine breeds, and 80 percent of these animals live in Rajasthan*

But why are we talking about camel conservation when this is a newsletter admittedly focused on all things?

Well, there's a reason.

For starters, camels are nice animals. It would be a shame to see their numbers dwindle. More importantly, most camels surviving today are domesticated. And domestication follows the law of demand and supply.

Let me explain.

When farmers decide to rear camels, they're doing so under the assumption that they'd be able to make money off of them. And there was a time when this assumption would have held true. Camels were considered indispensable in many parts of Gujarat and Rajasthan. They were used in the transportation

department. They were used by border patrol and they even came in handy whilst farming. But today, you have special equipment and vehicles that outperform camels more often than not. In fact, they have been rendered redundant for the most part and camel herders no longer make a lot of money anymore.

Some people will argue that they are still a tourist attraction. And while that may be true, income from this domain is also on the downside.

Finally, there's camel milk—a real money-making opportunity that many believe could turn the fortunes of both farmers and camels alike. Camel milk has been touted as the next superfood and there's new demand for this exotic product from many parts of the country. The only problem — the value chain is a bit broken. Camels are reared in parts of the country that are pretty isolated from urban centers. Meaning refrigerating and transporting the milk to processing facilities can be a bit of a challenge.
However, despite the problems, the opportunities abundant in the dairy industry are there for all to see and there are those who believe that the camel population may now be on the rise largely thanks to this newfound source of revenue.

Having said that, however, these animals are still not out of the woods yet.

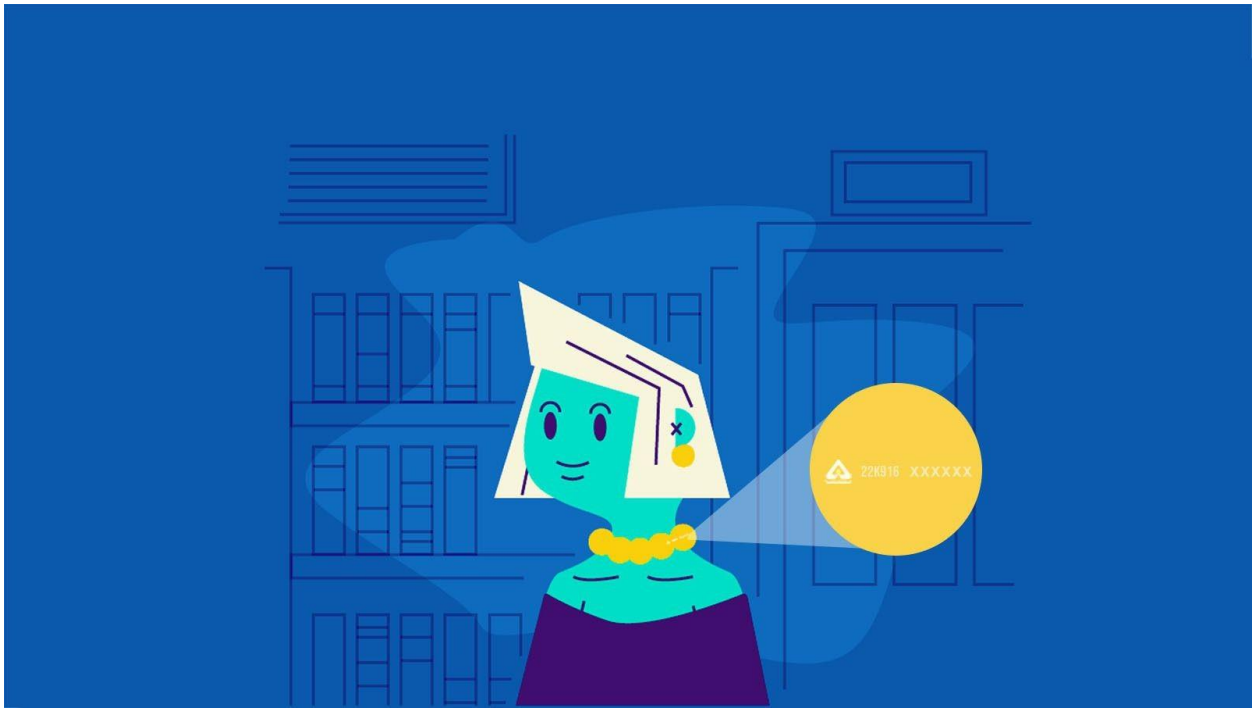
Take for instance the case of Kharai camels.
Local estimates suggest that there were about 10,000 camels living in Gujarat only a few years ago. Now there are less than 4,500. What explains the precipitous fall you ask.

Industrialization!!!

As we already noted, farmers have a tough time monetizing camel livestock. So when it becomes expensive to tend to these animals, they abandon domestication altogether. After all, raising camels is no easy affair. You have to spend money on medicines, grooming, and food. And you can't just buy food from a pet store. You have to let the Kharai graze in the mangroves.
But the mangroves are currently under threat from a host of salt manufacturing companies. Granted they create new jobs and help the local economy, but they also do some damage when their operations affect the growth of saline-rich mangrove trees. And with these plants hard to come by, farmers have to take their camels to neighboring villages in a bid to feed them—all of which costs money.
And at some point in time, they'll throw in the towel. They'll stop with the domestication enterprise altogether and let things slide. Now bear in mind, the Rajasthan government explicitly bans the slaughter of camels for meat. But that doesn't prevent farmers from abandoning them altogether. When they have no recourse, they will ditch these animals even if it hurts them to do so. Because when they can't make a decent living, the camels turn into a liability, oftentimes, pushing farmers into the throes of poverty. So really, this is an act of last resort. And if the government is serious about halting a further decline in camel population, then they have to create new money-making opportunities for farmers. Invest in the camel-milk value chain, market tourist destinations, and create new laws to prevent the further erosion of grazing areas. It's perhaps the only way to make a dent in this department.

A unique identifier for gold?

In this newsletter, we see why jewelers across the country are upset with the introduction of what some people believe is the new Aadhar for gold.



Policy
The story

Before we get to the heart of this story, we need to talk about hallmarking. Think of gold hallmarking as a fitness test for jewelry. If you have a piece of gold artifact lying around, you'd want to know if it's pure. And a hallmark is a certificate authenticating the stated purity and fineness. Until now, jewelers had the choice to hallmark gold or simply sell them unmarked. But in June, the government made it mandatory for everyone in the value chain to hallmark gold jewelry at the point of the first sale.

Meaning as it stands, most jewelers will have to send their inventory to a hallmarking center and get it certified before selling them to consumers. Now before you panic, know that the rule doesn't apply to you. If you're an ordinary consumer holding gold without a hallmark, you'll still be able to sell it off to a jeweller. No problem here. However, the jeweller can't sell the piece to the next customer until it's hallmarked once again.

And while the government has granted exceptions for certain kinds of gold artefacts, you can expect most pieces of gold jewellery to be hallmarked from here on in.

But hallmarking isn't the only thing that's mandatory now. The government also wants to identify and track every piece of jewellery made and sold in this country. So, they put together something else—an HUID or Hallmarking Unique ID to go alongside the purity mark. Based on the

new rules, every piece of jewelry must also carry a unique six-digit alphanumeric code. This unique code will help in identifying the jeweler, shop where the piece was sold, who bought it, the place that hallmarked it, the address and phone number of everyone involved in the transaction… everything in a single database. And if this looks awfully similar to an Aadhar card or a property document, well yeah, it's similar in many ways. It's a unique identifier, only, in this case, you can attach a new identifier each time you melt the old jewelry to fashion something new.

But why would the government want to do any of this?

Why would they want to uniquely identify a piece of gold jewelry?

If you're thinking of this, it probably means you've never dabbled with gold jewelry. Even with hallmarking, jewelers have been able to offload substandard products because it's difficult to trace the item back to them. However, the moment you throw in a unique ID in the mix, there's an added level of accountability here. And there are people who believe that it makes the whole value chain more robust.

But jewelers aren't entirely happy with this whole HUID maneuver.

Sure, mandatory hallmarking is deemed a necessity these days, but tagging every piece of jewelry? That is an administrative nightmare. Small retailers would have to manually input details on the Bureau of Indian Standards' website and then send it for hallmarking. This may mean more overhead. Then there are issues with the processing centers.According to a report in The Economic Times — "*annually almost 100–120 million pieces of jewelry are manufactured in India. In addition, the existing stock of almost 60–70 million pieces is yet to be hallmarked. This takes the total count of pieces to be hallmarked this year to almost 160–180 million pieces. The current speed and capacity of hallmarking centers is about 200,000 pieces per day at which it would take 800–900 days, or 3–4 years, to mark the pieces*" More importantly, there is the fact that hallmarking is still a manual enterprise. You send in your inventory for hallmarking hoping to turn them over quickly, only to find out that it would take a few extra days due to backlog. Waiting means losing money and jewelers aren't entirely happy with this whole scheme. So yeah, the government wants to induce more accountability in the system and the jewelers feel the system may crumble under pressure if the rules are implemented as is. Two differing points of view from two important stakeholders.

Only question — Who's side are you on?

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