**Lectrix Technologies Pvt. Ltd.** Feature List for SOP

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## Executive Summary

The following document contains the feature list for LX70 with respect to SOP. These features have been derived and designed based on benchmarking study of various players within or near the mass premium segment, user stories/ pain-points and inputs from the team.

Features were prioritized based on a scorecard analysis with KPIs such as Reach, Impact and Cost/ Effort (Out of 5 each). UX Score and Implementation Score were calculated as follows:

UX Score = Reach X Impact;

Implementation Score = UX Score X (Cost/ Effort);

Features with a higher Implementation Score were given more priority keeping in mind convenience and perfect experience for the user.

**Variants**

# LX70

Skin B

1. kWh
2. kWh

ADD

-

ON PACKS

Smart

-

Safety

Pack

Premium Pack

Service Pack

Accessories Pack

***Note:***

1. *VCU hardware is common across all variants. Feature locking to be done via software.*
2. *Smart and Premium pack can only be bought at the time of order, while Service pack can be added anytime.*
3. *Premium pack would include premium features and the Smart pack as a bundle.*

## Feature List (SOP)

|  |  |
| --- | --- |
| SOP | Feature |
| **BASE** | **Custom modes** ★ |
| **Real time Km/ Wh** ★ |
| **Boot Space - 1 full face helmet + Charger** ★ |
| **TFT 5"** ★ |
| **Hill Hold** ★ |
| **Turn by turn Nav** ★ |
| Day/ Night mode |
| Crash & Fall alert (BLE) |
| Last Parked Location (BLE) |
| Public Fast Charging (3 kWh) |
| Remote Diagnostic |
| Shut down Mode |
| Engaged Side Stand -> motor cut-off |
| Accident/ Topple -> motor cut-off |
| Regeneration |
| Standard riding modes (Eco, Power) |
| Boost mode/ Nitro |
| Incoming call alert |
| Call acceptance and rejection |
| SOS (On App) |
| Distance to go |
| Average Km/ Wh |
| Music Control |
| Multiple rider profiles |
| OTA – Bug Fixes |
| Ride Analytics |
| Periodic Service alerts |
| USB Charger for mobile charging |
| Pass switch |
| Multiple Cluster themes (3 kWh) |
| Utility pockets |
| Hazard Lights (Via Parking Button) |
| Front Hook |
| Flat Footboard |
| **SMART/ SAFETY**  **PACK**  **ADD-ON**    @INR X | **Child mode/ Parental Control** ★ |
| OTA – Graphics/Firmware |
| Crash & Fall alert Plus (4G enabled) |
| Live Location |
| Vehicle health Data |
| Geo Fencing |
| Last Parked Location |
| Theft Alert |
| |  | | --- | | (Beyond SOP) |   **PREMIUM PACK ADD-ON**  **(Fixed Variants)**  @INR Y    **Inclusive of SmartSafety pack features!** | **TFT 7" with Touch** ★ |
| **Screen Gestures** ★ |
| **Onboard Downloadable Maps** ★ |
| **Keyless - Proximity Unlock** ★ |
| SOS Plus (On Screen) |
| TPMS |
| Document Widget |
| **SERVICE PACK**  **ADD-ON**  **(2\* Year Renewal)**    @INR Z | **3 Years (Standard) + 5 Years\* (Extended) Warranty** ★ |
| **Pre-emptive Diagnostics + Periodic Service Alerts (Base Feature)** ★ |
| **Free Service!!!** ★ |
| **Advanced Tool Kit** ★ |
| **2 Coupons - Free Pick and Drop** ★ |
| Road-Side Assistance |
| **Accessories – SOP**    [Scooter Use case accessories.xlsx](https://lectrixtech-my.sharepoint.com/:x:/p/naresh_kumar5/EQqcyDo1MdJBm4z5T-hIQsIBW0bM9NfNEvGvUO5RTjQEdQ?e=C8Goqd) | **850 W Charger\*\*** ★**/ Wall mount\*** |
| Screen Guard |
| Ladies' footrest/ Buddy Step |
| Centre Stand |
| Floor Mat |
| Helmet – Half face |
| Utility Pocket |
| Number Plate Rubber End |
| Mobile holder |
| All bodyguard |
| Chrome Bar Ends |

*\*Can be modified later does not impact any build*

*\*\*Standard 450W charger will come with the vehicle, 850W is optional*

## Feature List (Alpha)

|  |  |
| --- | --- |
| SOP | Feature |
| **BASE** | **Custom modes (Mobile – Vehicle Interaction)** ★ |
| **Boot Space - 1 full face helmet + Charger** ★ |
| **TFT 5"** ★ |
| **Hill Hold** ★ |
| **Turn by turn Nav** ★ |
| Last Parked Location (BLE) |
| Shut down Mode |
| Engaged Side Stand -> motor cut-off |
| Accident/ Topple -> motor cut-off |
| Regeneration |
| Hazard Lights |
| Standard riding modes (Eco, Power) |
| Incoming call alert |
| Call acceptance and rejection |
| Distance to go |
| Average Km/ Wh |
| Music Control |
| Pass switch |
| Flat Footboard |
| Mobile holder |

**Annexure I – Deleted Features**

|  |  |  |  |
| --- | --- | --- | --- |
| S. No. | Feature | Category | Reason for deletion |
| 1 | Auto Brightness | Base | 1. Benchmarked against a 1750 nits’ system, LX70 will have an 800 nits’ system, and change in brightness won't be very noticeable in daylight 2. Most of the time vehicle will run in open, having smart brightness control would not affect much + for a better UX the sensor has to be of a very high grade so that change in brightness is smooth  3. Dark mode will suffice in most cases |
| 2 | Parking Brake Lever | Base | 1. Packaging constraint 2. Not a must have feature.  3. Benchmarked Ather by parking on 12-degree grade, with riders’ feet on footboard, it withstood easily without a Parking Brake Lever |
| 3 | Kill switch | Base | 1. Lack of control I/O pins on ConnectM VCU 2. Not homologation critical |
| 4 | Stepped Mirrors | Base | 1. Design constraint - handlebar and head panels |
| 5 | Home Fast Charging Option | Base | 1. Battery life degradation 2. Huge cost impact |
| 6 | Joystick - Manual Cluster Control | Base | 1. Not enough Pins in the ConnectM VCU 2. In Zaptics VCU, Touch would supersede Joystick |
| 7 | On Screen Live Maps | Premium | 1. VCU needs a processor strong enough to run android and do live map rendering with decent latency; cost of VCU |
| 8 | 2 Coupons - Free Scooter Wash | Service Pack | 1. Not a must have feature |

## Annexure II – Feature Scorecard/ Secondary Market Research

UX Score and Implementation Score were calculated as follows:

UX Score = Reach X Impact;

Implementation Score = UX Score X (Cost/ Effort);

|  |  |
| --- | --- |
| **Reach** | **Description** |
| 1 | Extremely Low Reach, < 10% customers will appreciate the feature |
| 2 | Low, 10 - 30% customers will appreciate |
| 3 | Medium, 30 - 50% customers will appreciate |
| 4 | High, 50 - 75% customers will appreciate |
| 5 | Extremely high, > 75% customers will appreciate |
| **Impact** | **Description** |
| 1 | Low, doesn’t add a lot of value. customer can live without it |
| 3 | Medium, adds value but the customer may still live without it |
| 5 | High, adds a lot of value, customer wants it |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Feature | Reach | Impact | Cost/ Effort | UX Score | Implementation Score |
| TFT 5" | 5 | 5 | 5 | 25 | 125 |
| Crash & Fall alert | 5 | 5 | 5 | 25 | 125 |
| Incoming call alert | 5 | 5 | 5 | 25 | 125 |
| Call acceptance and rejection | 5 | 5 | 5 | 25 | 125 |
| Side stand indication | 5 | 5 | 5 | 25 | 125 |
| Battery level & low battery indicator | 5 | 5 | 5 | 25 | 125 |
| Scooter Mode indicator | 5 | 5 | 5 | 25 | 125 |
| Distance to go | 5 | 5 | 5 | 25 | 125 |
| Day/ night mode | 5 | 5 | 5 | 25 | 125 |
| Real time Km/ Wh | 5 | 5 | 5 | 25 | 125 |
| Average Km/ Wh | 5 | 5 | 5 | 25 | 125 |
| Theft alert | 5 | 5 | 5 | 25 | 125 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Service alerts | 5 | 5 | 5 | 25 | 125 |
| USB Charger for mobile charging | 5 | 5 | 5 | 25 | 125 |
| Pass switch | 5 | 5 | 5 | 25 | 125 |
| Boot Space - 1 full face helmet + Charger | 5 | 5 | 5 | 25 | 125 |
| Utility pocket | 5 | 5 | 5 | 25 | 125 |
| Front Hook | 5 | 5 | 5 | 25 | 125 |
| Flat Footboard | 5 | 5 | 5 | 25 | 125 |
| Accident topple -> motor cut-off | 5 | 5 | 5 | 25 | 125 |
| Buzzer | 5 | 5 | 5 | 25 | 125 |
| SOS | 5 | 5 | 5 | 25 | 125 |
| Grab handle | 5 | 5 | 5 | 25 | 125 |
| Ladies' footrest | 5 | 5 | 5 | 25 | 125 |
| Floor mat | 5 | 5 | 5 | 25 | 125 |
| Seat cover | 5 | 5 | 5 | 25 | 125 |
| Mobile holder | 5 | 5 | 5 | 25 | 125 |
| Hill Hold | 5 | 5 | 5 | 20 | 125 |
| Custom modes | 5 | 4 | 5 | 20 | 100 |
| TFT Display 7" with Touch | 5 | 5 | 4 | 25 | 100 |
| Screen Gestures | 5 | 4 | 5 | 20 | 100 |
| Document Widget | 5 | 4 | 5 | 20 | 100 |
| Live Location | 5 | 4 | 5 | 20 | 100 |
| Last Parked Location | 5 | 4 | 5 | 20 | 100 |
| Vehicle health data | 5 | 4 | 5 | 20 | 100 |
| Geo Fencing | 5 | 4 | 5 | 20 | 100 |
| Standard riding modes (Eco, Power) | 5 | 4 | 5 | 20 | 100 |
| Child Mode/ Parental Control | 5 | 4 | 5 | 20 | 100 |
| Cluster themes | 5 | 4 | 5 | 20 | 100 |
| Public Fast Charging | 5 | 4 | 5 | 20 | 100 |
| Parking Mode Switch | 5 | 4 | 5 | 20 | 100 |
| Centre Stand | 5 | 4 | 5 | 20 | 100 |
| Onboard Downloadable Maps | 5 | 4 | 4 | 20 | 80 |
| Music Control | 4 | 4 | 5 | 16 | 80 |
| Multiple rider profiles | 4 | 4 | 5 | 16 | 80 |
| Key encryption | 5 | 4 | 4 | 20 | 80 |
| Remote Diagnostic | 4 | 4 | 5 | 16 | 80 |
| Shut down Mode | 4 | 4 | 5 | 16 | 80 |
| OTA (Over the Air) | 5 | 4 | 4 | 20 | 80 |
| Turn by turn Nav | 5 | 5 | 3 | 25 | 75 |
| Regen | 5 | 3 | 5 | 15 | 75 |
| Boost mode | 5 | 3 | 5 | 15 | 75 |
| Ride Analytics | 5 | 3 | 5 | 15 | 75 |
| Mode switch | 5 | 3 | 5 | 15 | 75 |
| Keyless | 5 | 5 | 3 | 25 | 75 |
| 850 W Charger | 5 | 3 | 5 | 15 | 75 |
| TPMS | 5 | 3 | 5 | 15 | 75 |
| Luggage rack | 5 | 3 | 5 | 15 | 75 |

*\*Cells highlighted with grey are for accessories*

**Annexure III – High Level Feature Description**

|  |  |
| --- | --- |
| Feature | Functionality |
| Turn by turn Nav | App -> VCU -> Cluster over BLE |
| Onboard Downloadable Maps | Over 4G Telematics |
| Incoming call alert | App -> VCU -> Cluster over BLE |
| Call acceptance and rejection | Will be done via Ignition button calibration (Long press to accept and cut an ongoing call, single press to reject) |
| Distance to empty | VCU will calculate based on recent efficiency |
| Day/ night mode | Ambient light sensor will be calibrated |
| Real time Km/ Wh | VCU will calculate based on real time energy consumption data from battery |
| Average Km/ Wh | All time average of last trips completed |
| Music Control | Over Ignition: Single tap for next song, long press for play/ pause, double tap for previous.  **Note:** Call operations will take precedence over all music functionalities |
| Screen Gestures | Dependent on touch |
| Document Widget | Dependent on touch, user can swipe to see document screen with DL etc. |
| Multiple rider profiles | Over app, users can register and share among family |
| Live Location | 4G Telematics -> app |
| Last Parked Location | BLE/ 4G Telematics -> app |
| Theft alert | Detection via IMU, alert sent on the app by 4G Telematics |
| Vehicle health data | To be available on app for owner to know if any sub-system has failed over 4G telematics |
| Ride Analytics | Vehicle trip data available on app |
| Service alerts | Regular alerts on app |
| Crash & Fall alert | Detection via IMU, alert sent on the app |
| Geo Fencing | over app via 4G telematics |
| Hill Hold | IMU will work for both uphill and downhill and auto activation when vehicle speed is 0 kmph (for 2 kWh - battery IMU) |
| USB Charger for mobile charging | Provided in utility pocket |
| Custom modes | One custom mode where user can adjust performance on app or Touch cluster.  **Note:** Only one custom mode at a time will be taking that slot |
| Standard riding modes (Eco, Power) | Eco mode optimized for range, additional performance automatically available on gradients.  In Power mode, entire capability unlocked |
| Child Mode/ Parental Control | Low speed EV like performance intended for first time riders |
| Regen | Pre-set values to mimic ICE scooter engine braking; no user control |
| Boost mode | Will be done on park switch |
| Pass switch | Integrated with the low and high beam switch |
| Boot Space - 1 full face helmet + Charger | Standard across variants |
| Cluster themes | Pushed over the app to VCU |
| Utility pockets | Standard, minimum one phone storage |
| Front Hook | Standard |
| Key encryption | BLE to be integrated in key |
| Flat Footboard | Standard |
| Public Fast Charging | Only available on 3 kWh variants using existing infrastructure |
| Remote Diagnostic | Available to user only via 4G telematics, this feature is for lectrix analysis |
| Shut down Mode | VCU, Battery and IoT will go into deep sleep, wake up by button touch |
| Accidental Topple -> Motor Cut-off | Detection by IMU; no user control |
| Keyless | functionality over Bluetooth and key fob provided |
| SOS feature | On Touch based cluster, swipe on screen to confirm |
| OTA (Over the Air) | 4G telematics, non 4G pack users - service centre |
| 850 W Charger | Option to charge in 3 hrs |
| TPMS | Standard accessory across variants |
| Mobile holder | Spacer installed on both mirror mounts. attaching TVS image for reference with extended mount to explain to concept |

**Annexure IV – References and Version Control**

## Version Control

***Feature List Version:***

Feature List version x.y.z would imply:

X increments on addition or addition + deletion of features, Y increments on deletion of features, Z increments on description or PRD modifications.

So, v1.1.0 implies that this document has been modified by deleting some features from v1.0.0

***Document Version:***

Document version control is simply x.0, where x increments if a change has been made.

## References

1. [Features Specs - Scorecard](https://lectrixtech-my.sharepoint.com/:x:/p/naresh_kumar5/EQ-wy9HLg81Ls3a8OSK4nOoBDdGXTqO8A5IeQC5A1pRkoQ?e=U93uZ2)
2. [Lectrix Model Specification.xlsx](https://lectrixtech-my.sharepoint.com/:x:/p/naresh_kumar5/EYZY7SZrSHlNtapXQeN8_S4BiryN6fPQqHkVeU0Sv63DjQ?e=5ySreP)
3. [Feature List v1.0.xlsx](https://lectrixtech-my.sharepoint.com/:x:/p/sanyam_khosla/EaaAVju_Bj5KuwDPiDKqlUIBJxDA_OpC_i2OGpsJkXjiFA?e=XcAMAX)
4. [Scooter Use case accessories.xlsx](https://lectrixtech-my.sharepoint.com/:x:/p/naresh_kumar5/EQqcyDo1MdJBm4z5T-hIQsIBW0bM9NfNEvGvUO5RTjQEdQ?e=C8Goqd)