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Title :

Inducing ELV management through Project Management & leadership to reduce pollution in India

Theme:

Project Management Leadership > To accelerate Economic Growth

Keywords:

ELV implementation in India, Pollution reduction, Project Management, Leadership, Swatch Bharat Mission, Government led projects, Automobile, Vehicle

Table of Contents

1..**Abstract**

'Public health is more important than industry's interests' – represents an observation that if a better technology is available then it should be adopted.
There has been focus on implementation of environmentally friendly BS-IV fuel emission standards. However opportunity needs to explored in End of Life Vehicle (ELV) management system.
Current, vehicle population in India indicates that ELVs will soon create environmental concerns, unless an appropriate ELV is developed.
In India, vehicle scrapping sector is unorganized and requires project management approach.
Government's leadership in a program, which implements and promotes systematic ELV would not only reduce pollution but also will generate employment. Presently, workforce involved in vehicle scrapping are exposed to hazardous wastes and may not be retrieving appropriate value for efforts contributed. Also workload fluctuation in vehicle scrapping sector is common – as the sector is unorganized.
ELV program may take considerable time for implementation , however it would be a unique one.
Program could start with understanding similar ELV system in developed nation.
ELV Program would need customization basis state and vehicle type such as passenger vehicle or commercial vehicle.These customization would require guidance and leadership of Govt.
For successful implementation program will also require active stakeholder's participation.
Also ELV program would require control mechanism(to manage exception scenarios) and roll out plan(for stage basis implementation) across India.

1.1 **Intent**

The paper explore how project management leadership would be useful in deploying End of Life Vehicle(ELV) Management System in India.

Presently, in India does not have a regulated End of Life Vehicle management system.Most developed countries have ELV system implemented. The paper explores how using Project Management & leadership ELV can be replicated in India to eliminate pollution and hazards created due to absence of ELV system.

2.Introduction

India is the largest market for 2 wheelers and 4th largest car and commercial vehicle manufacturer.

This translates into high number of End of Life Vehicle, which needs to be scrapped or disposed.

A vehicle could reach End of Life due to :

a. Reaching a particular age limit
b. Failing to meet emission standard

ELV activities include dismantling, shredding and Auto shredder residue recycling.

Objective of this paper is to explore project management concepts in successful implementation of ELV system in India.

A high level steps for ELV in India is as follows :

a. Vehicle is deregistered
b. The deregistered vehicle is sold to dismantler
c. Dismantler attempts to extract components which can be resold
d. Remaining dismantled vehicle is dropped in remote open space

Current above process is not only inefficiency but also leads to pollution.For example engine oil or other fluids are hardly extracted –these fluids when disposed without treatment could pollute ground water.Likewise glass components of vehicle are often broken during manual extraction – hence polluting surrounding area or locality.

India's development is happening at a rapid pace.This growth would also reflect in vehicle count growth. Hence this is the ideal time to replicate best practices of ELV.

Technical aspect of ELV system implementation in India has been studied by various bodies. However program management and leadership aspect also requires similar focus.

3. Project management of ELV system implementation

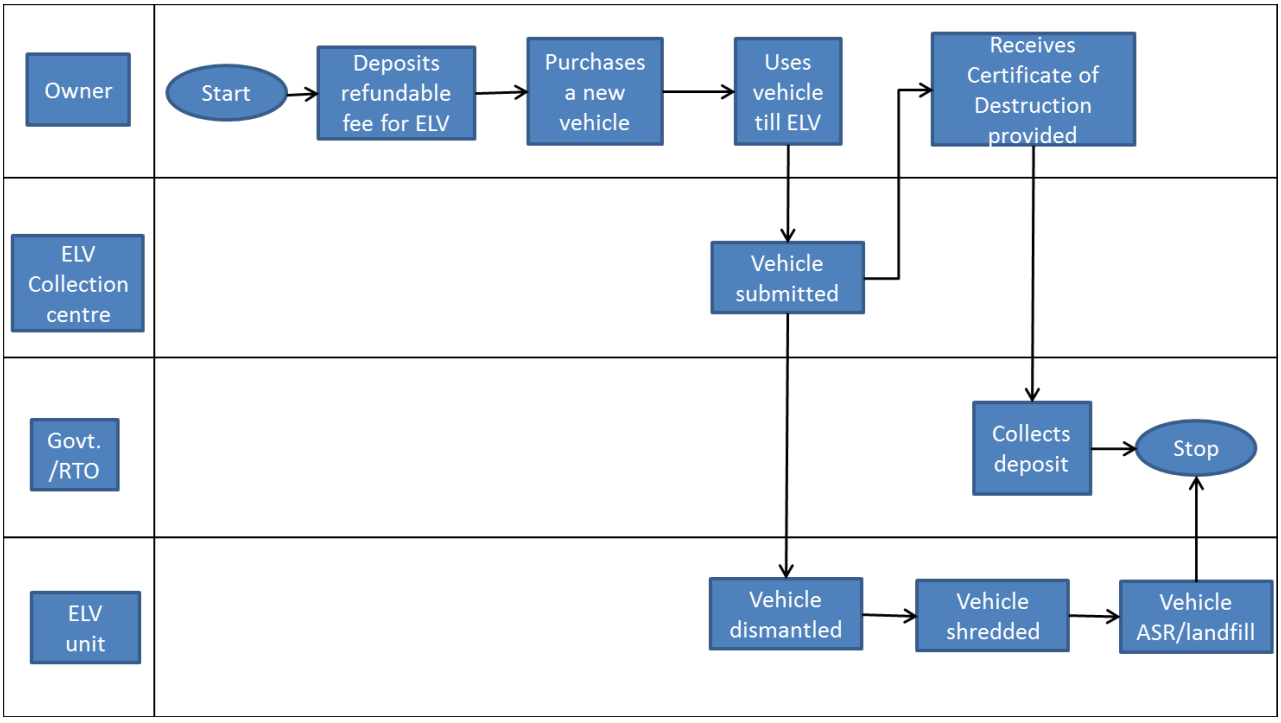
Japan is among top 10 nations with respect to car population. It has around 600 car/commercial vehicle per 1000 people. While India has less than 50 car/commercial vehicle per 1000 people.

Japan also has a robust ELV management system.

Hence replicating ELV best practices with required customization for Indian vehicle would be long term solution.

A simplified ELV system for implementation of Indian ELV system is in Figure 3.1.

Figure 3.1



3.1 Key Challenges

3.1.1 Infrastructure inequality among cities

Vehicle management Infrastructure of different states are not same.Due to this it is difficult to gauge exact number of vehicle which are not meeting inspection and emission norms.Thus a certain segment of vehicle which are ELV are not identified.

3.1.2 Volume and Vehicle type variants are high

Table 3.1 shows count of 5 major types of vehicle in India

Table 3.1

Type	ELV count in Million
2W	7.2
3W	0.2
Car	0.7
Bus	0.04
CV	4.1

Also ELV system in developed countries are designed for 4 wheelers and commercial vehicle.

3.1.3 ELV refund payment mode

Post demonetization number of online and cashless payment has drastically increased.

However Indian economy still remains cash based – Hence enough controls are required for authentic ELV refund.

3.1.4 Lack of Awareness

Presently concept of ELV in India is limited to certain segments.

Also user group requires education and awareness on other salient activity such as transfer of ownership during resale of vehicle,as ELV refund is provided to last registered owner of the vehicle.

3.2 Approach

Implementation of ELV system shown is Figure 1 from project management perspective would be follow stages:

3.2.1 Initiation

Studying various ELV system of other developed nation and customizing ELV requirement as per Indian Vehicle

Apart from Japan, European nations and United states have a robust system to manage ELV.ELV system of these nations needs to be studied prior implementation.

However Indian vehicle population distribution and category is significantly different from these countries. 80% of vehicle population comprises of 2 wheelers and 3 wheelers. Also user group of these vehicles are not aware about ELV requirements. Hence a mechanism which collects ELV refundable fee while purchasing new vehicle is required. This amount would be refunded once vehicle is de registered and certificate of destruction is collected.

3.2.2 Planning

Estimating infrastructure cost, scope and budget for ELV scarping units is critical.

Govt. would need to decide the cities where vehicle scrapping could be completed in an organized manner.

Ideally theses cities should be metros, which are well connected with other parts of the country. Vehicles collected in various centers across country would be dispatched to metro ELV units for scarping.

Technical knowhow of each ELV steps through Work Breakdown Structure is also essential

Moreover communication and framing of law prior to implementation is essential tool and techniques such as Gantt chart and communication plan could be used effectively.

As transport department is governed by individual states - Identifying stakeholder and owners for managing uncertain situation is salient from Risk Management perspective

3.2.3 Execution

Identifying vehicle collection centres and assign resources to centres would be key steps in execution

For measurement and reporting of KPIs ELV management unit need to set up website and portal for deregistration and COD issue.

Also periodic audit of issued certificate and refund is required to assure quality

Support center and helpdesk needs to be established to resolve queries or issue and manage stakeholder engagement.

3.2.4 Monitoring and Controlling

Controlling ELV system as per feedback or required changes would ensure success of ELV management system in long run. For example any change in any Bharat Stage emission norm is required for integrated change management

Ensuring support from external consultant for smooth operation and control risk

3.2.5 Closure

Finally, ELV system implementation project and procurement can be closed post- handover to ELV operating in charge.

Deployment of ELV requirement and compliance should be implemented in phased manner:

a.First phase – only in metros

b.Second phase – in metros + state capitals

c.Third phase – All India

Table 3.2 summaries ELV project management approach for India

Table 3.3 shows tentative number of vehicles to be covered under ELV in next 15 years basis current vehicle count

Table 3.2

Initiation	**Planning**	**Execution**	**Monitoring and Control**	**Closure**
Studying various ELV system	Estimate infrastructure(Budget)	Identifying vehicle collection centres (Assign Resources)	Controlling ELV system as per feedback or required changes(Perform integrated change management)	Closing of ELV system implementation project and Handover in waves
Understand customization required in India	Decide the cities (Scope)	Setting up website and portal for deregistration and CoD (KPIs)	Ensuring support from external consultant for smooth operation (Control Risk)	
	Technical knowhow of each ELV steps (WBS)	Audit of issued certificate and refund (Performing Quality Assurance)		
	Communication and framing of law (Comminication plan)	Support centre and helpdesk to resolve queries or issue (Manage stakeholder engagement)		
	Identifying stakeholder and owners (Risk Management)			

Table 3.3

Type	**Vehicle count in Million**
2W	154.3
3W	15.8
Car	28.6

Bus	2
CV	9.3

3.3 Sustenance

a. Efficient centers to collect ELV and capability creation in these centers to inspect vehicle for ELV.

b. Framing Scrapping rule/center as per vehicle type

c. Linkage of ELV refund and COD with Aadhar or unique number.

d. Creation of ELV support centers, which will guide vehicle user on ELV procedure and would help vehicle owner in completing formalities pertaining to ELV

e.Control mechanism should be implemented to incorporated required modification or changes in ELV management system

4 Benefits

a. Reduction in pollution due to current unorganized vehicle disposal

b. Recovery/Recycling of item reducing material cost for future production

c. Generation of employment opportunity in organized ELV syatem

5 Conclusion

Benefits of ELV management system are significant.It not only protects environment but also generates employment opportunity .Hence initiatives such as ELV management should be a salient Govt. led project for Swatch Bharat Mission.

Required Updation in ELV system basis technical aspects should also be incorporated on periodic basis

The approach shared in this paper attempts to visualize different project management aspects related to ELV system implementation. However one also needs to consider certain assumption or practical restriction (such as financial feasibility, social acceptance) which needs to be in place prior to introduction of ELV system in India.

Also one must consider other initiatives such as better mass transportation system, which would reduce the requirement or dependency on ELV system – since such solution would directly reduce total number of vehicle on road.

6. Annexure

List of figures

List of tables

List of abbreviation

S no	Abbreviation	Full Form
1	2 W	Two Wheeler
2	3 W	Three Wheeler
3	4 W	Four Wheeler
4	COD	Certificate of Destruction
5	CV	Commercial Vehicle
6	ELV	End of Life Vehicle

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