Policy on Reducing Impact of Alien Species on Campus

1. Introduction:

The purpose of this policy is to establish guidelines and procedures for managing and reducing the impact of alien species on the Manipal University Jaipur's campus. The university recognizes the potential threat that invasive alien species pose to the local ecosystem, biodiversity, and the overall well-being of the campus environment.

2. Definition of Alien Species

Alien species, as defined in this policy, refer to any non-native species introduced intentionally or unintentionally by human activities, which may cause harm to the native environment, local species, and ecological balance.

3. Objectives:

a. The university aims to prevent the introduction and spread of alien species on campus.

b. Implement measures for the early detection and rapid response to invasive species.

c. Develop strategies to manage and control the impact of existing alien species on campus.

d. Promote awareness and education among the campus community regarding the risks associated with alien species and ways to prevent their spread.

4. Responsibilities:

a. The administration will oversee the implementation of this policy and allocate necessary resources.

b. Responsible for executing prevention, detection, and control measures.

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c. Offer expertise in identifying and managing alien species through research and education.

d. Support the policy by adhering to guidelines, reporting sightings, and participating in educational initiatives.

5. Prevention Strategies:

a. Prioritize native species in landscaping and avoid planting invasive plants.

b. Inspect and regulate incoming materials to prevent accidental introduction of invasive species.

c. Conduct awareness programs to educate staff, students, and visitors about the risks and methods to prevent the introduction of alien species.

6. Early Detection and Rapid Response:

a. Offer training to staff and students to identify and report potential invasive species.

b. Establish a reporting system for the campus community to report suspected sightings of alien species.

c. Develop protocols for the immediate response upon detection of invasive species to prevent their establishment and spread.

7. Management and Control Strategies:

a. Implement IPM strategies for the control and eradication of invasive species using eco-friendly methods.

b. Undertake restoration efforts in affected areas by removing invasive species and restoring native habitats.

c. Engage in research collaborations and partnerships to develop innovative methods for controlling and managing alien species.

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8. Compliance and Review

a. All members of the university community are expected to adhere to this policy.

b. Periodic reviews and assessments will be conducted to evaluate the effectiveness of the policy and make necessary adjustments.

9. Conclusion:

The University acknowledges the importance of protecting the campus environment from the adverse impacts of alien species. This policy aims to ensure a sustainable and healthy ecosystem, promoting biodiversity and environmental conservation.

10. Policy Adoption and Implementation:

This policy will be disseminated across the university community through official channels and will be effective upon adoption. Continuous efforts will be made to implement, monitor, and improve its effectiveness.

Version History

Number	Year	Major Revision
Version 2.0	2022	Enhancement of native bio- diversity
Version 1.0	2019	Initial policy

Approval:

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Alien Species Impact Reduction Plan Manipal University Jaipur

Reducing the impact of invasive alien species—species that are introduced to an environment outside their natural range and cause ecological harm—is essential for protecting biodiversity, ecosystems, and local economies. Here are some strategies for reducing their impact:

1. Prevention and Early Detection

- **Border Controls**: Enforcing strict regulations at borders and ports can help prevent the introduction of alien species. This includes inspections of cargo, ballast water, and agricultural imports.
- **Public Awareness**: Educating travelers, pet owners, and trade industries about the risks of transporting non-native species can reduce accidental introductions.
- **Early Detection Programs**: Monitoring ecosystems for new invasions and quickly identifying alien species can limit their spread and impact.

2. Rapid Response and Eradication

- **Immediate Eradication Efforts**: Once a species is detected, rapid eradication may prevent it from establishing a population. This might involve physical removal, trapping, or targeted pesticide use.
- **Coordination Among Agencies**: Rapid response is more effective when conservation organizations, governments, and local authorities coordinate efforts, share data, and pool resources.

3. Biological Control

- **Use of Natural Predators or Pathogens**: Introducing a natural predator, parasite, or pathogen from the invasive species' native range can help control their population. However, this method requires extensive research to avoid unintended consequences on native species.

4. Habitat Restoration

- **Restoring Ecosystem Resilience**: Rehabilitating ecosystems can make them more resistant to invasions. For example, re-establishing native plant species can improve biodiversity, which limits available resources for invaders.
- **Enhancing Biodiversity**: Diverse ecosystems are often less vulnerable to invasive species because they have fewer ecological niches available for new species to exploit.

5. Legal and Regulatory Measures

- **Strengthening Laws and Regulations**: Governments can enforce regulations to control invasive species by regulating trade, imposing penalties, and banning certain high-risk species.
- **Supporting Invasive Species Management Plans**: Countries and regions can create management plans that outline priorities and actions to address invasive species based on local ecosystems and threats.

6. Community Involvement and Citizen Science

- **Engaging Local Communities**: Local volunteers and citizen scientists can help with monitoring, removing invasive species, and restoring habitats, especially in affected areas.
- **Involving Indigenous Knowledge**: Indigenous and local communities often have valuable ecological knowledge that can guide management and restoration efforts.

7. Research and Innovation

- **Developing New Control Methods**: Researching new biological, chemical, or genetic tools for managing invasive species can help make control efforts more effective and targeted.
- **Studying Climate Change Impacts**: Since climate change can influence the range of invasive species, understanding these dynamics is essential for future management.

Effective invasive species management requires continuous monitoring, adaptive strategies, and collaboration across sectors and borders.

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Restricted Entry-Exit

Smart Campus- Access Control

Flap Barrier:

- For authorizing the entry/exit of pedestrian RFID based smart flap barriers installed
- Eight parallel lanes with approx. 25-30 persons per minute
- Dashboard to monitor entry/exit

Boom Barrier:

- For authorizing the entry/exit of vehicles RFID based smart flap barriers installed
- RFID readers having range of 5 mtrs. maximum
- Dashboard to monitor entry/exit

In each block of hostel, RFID and Biometric based access control devices installed

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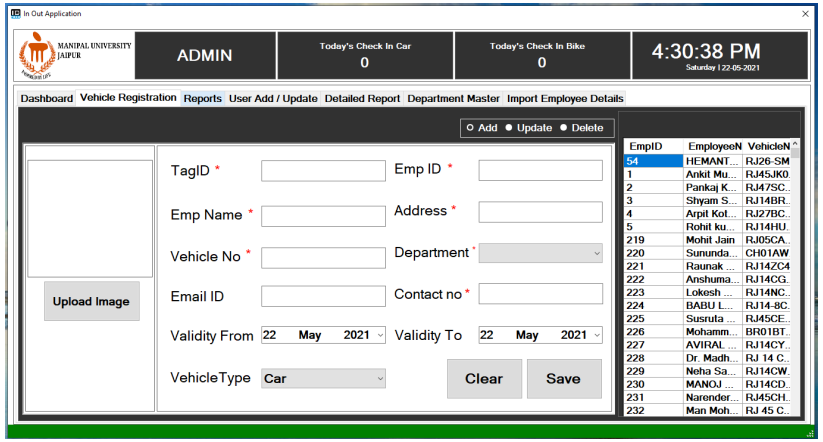
Clean And Smart Campus

Sensor based Smart Campus

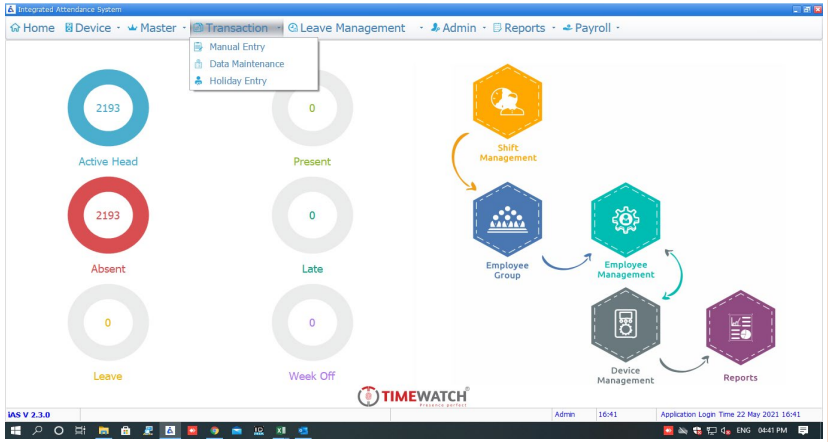
RFID and Sensor based access control for Vehicles

RFID smart access control at Entry/Exit (Flap Barriers)

Sensor based smart drip Irrigation



Dashboard- Access control based on automated barriers



Dashboard - RFID based smart access control at Entry/Exit

Smart Toilets based or urinal sensors

Smart Technology- Applications Platform

50 Software's License including 6 Operating System(Microsoft, Linux etc.) Software

24*7*365 IP CCTV Visibility

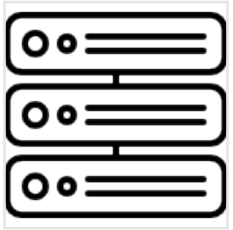
Wi-Fi Campus –Connected with 1300 CISCO Wi-Fi Access Point with Centralized controller

Biometric Authentication integrated to ESP

Redundant fiber backbone Infrastructure across campus

Secure , Easy and Scalable On-premises & Cloud platform for Office -365, ESP, RMS and University Websites

Smart Technology- Applications Platform

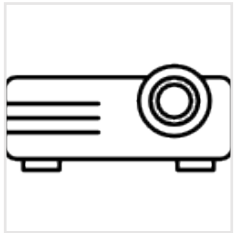


Servers-On-premise & On Cloud

1228 Desktops & Workstation

6000 Laptops

750+ IP Phones



193 Projectors

180 Printers & Photocopiers

760+ CCTVs

180 Managed Switches

Smart Technology- Applications Platform

Updated	Category	Name	Subject	Status	Owner	Last replier	Due Date	Location	Contact Number
02 Feb 19	Event-Meeting	Mr. Ankit Mundra	event on Smt. Sharada Pai Auditorium 10.02.2019	New	Rakesh Sharma	Mr. Ankit Mundra	NONE	Smt. Sharada Pai Auditorium	306
02 Feb 19	Event-Meeting	Admin Office [MU – Jaipur]	event on Dr. TMA Pai Auditorium 9-10 Feb 2019	New	Rakesh Sharma	Admin Office [MU – Jaipur]	NONE	Dr. TMA Pai Auditorium	306
02 Feb 19	Event-Meeting	Admin Office [MU – Jaipur]	Smt. Sharada Pai Auditorium 15 & 16 Feb 2019	New	Tarachand Choudhary	Admin Office [MU – Jaipur]	NONE	Dr. TMA Pai Auditorium	306
02 Feb 19	Event-Meeting	Admin Office [MU – Jaipur]	Dr. TMA Pai Auditorium 15 Feb 2019	New	Tarachand Choudhary	Admin Office [MU – Jaipur]	NONE	Dr. TMA Pai Auditorium	306
Yesterday	Event-Meeting	Dr. Sarika Singh	Arrangement of WiFi connection, Projector with VGA cable and pointer	New	Ravi Gupta	Dr. Sarika Singh	NONE	Room No. 014, Ground Floor, Academic Block 1	6375805159
Yesterday	Event-Meeting	Dr. Sarika Singh	Arrangement of WiFi, Projector, pointer and VGA cable	New	Ravi Gupta	Dr. Sarika Singh	NONE	Room No. 321, Third Floor, Academic Block 1	9772072583
11:52	Event-Meeting	Geetika Tankha	IT Requirements for event	New	Tanuj Goswami	Geetika Tankha	NONE	2AB faculty Block 6, Room 333	8239838763
12:28	Event-Meeting	Dr. Anand Pandey	Booking for Event (ICAMEN 2019)	New	Unassigned	Dr. Anand Pandey	NONE	Sharda Pai Auditorium	8890736344 Ext. 344

Online support desk for all MUJ events

http://helpdesk.muj.edu.in

Smart Instruments for- Fire safety measures

Fire Safety control room

Smart Campus- CCTV center

CCTV Command center Academic block

CCTV Command center Hostel block

Ongoing Projects of sustainable solution for society

Final Flus

- Using hyperboloid mathematical model to separate solid and liquid mechanically

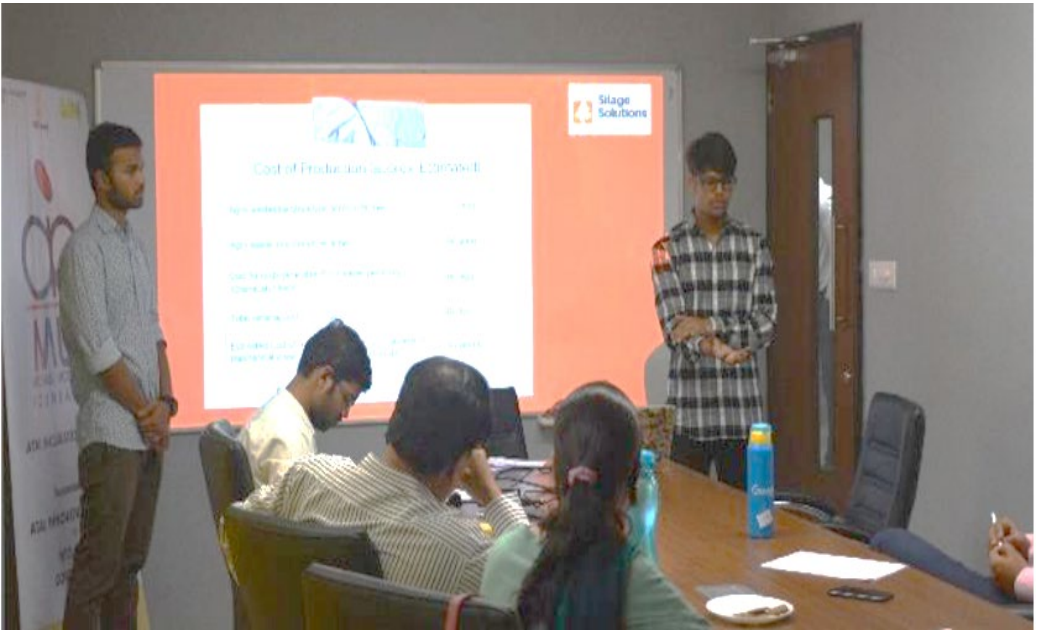
Future Waste Technologies Limited: a startup which is smartly manage the waste of a smart city. It has a waste managing app, place smart dustbins, smart waste collecting trucks, smart waste managing units for biodegradable, recyclable and non-biodegradable wastes. Thus, preventing any problems of waste.

GARBO
Aim to create awareness amongst common households by analyzing their everyday garbage and providing them with more environmentally friendly replacements.

Astute Conurbation: a project which is going to provide solution for waste management, water management by providing a new way to transfer it directly from home to waste treatment plant, and also going to bring technical advancement to our railway stations where we often see mismanagement, also further it is launching special purpose vehicle for different purposes. Also, it will be introducing Energy conservation products, Green energy building.

Silage Solutions works on developing products and processes to produce eco-friendly, affordable and high-quality items to replace single-use plastics, using crop residue which is otherwise burnt on the fields causing air pollution and respiratory diseases. It encourages farmers to use eco-friendly waste management techniques thus providing a secondary source of income.
Second

Ongoing Projects of sustainable solution for society



SmartFarm working with the aim of supporting rural India and will be the part of the program - "Start-up India, Stand-up India". It provides a platform comprising of rental services for agriculture machinery and Implements, audio-visual learning of schemes, technologies and methods, helps farmers in loan products and process & more.

FATE (Farmer's Awareness and Transmission Enterprise)

Increasing farmer's communication with other farmers, sponsors, urban folk, so that they can come together & discuss common problems, irrespective of location; so that solutions can be developed

GreenAccelaration

GreenAcceleration is the solution of a cleaner greener and healthier village by electrifying their lives. It work on an insect free village. our solution to this is a light which repels insect. And the electricity needed for the light to work comes from the road. It makes electricity from the road, and it is one of the cleaner and most ecological way of producing electricity. From this technology it can power the whole village if our product is laid over a stretch of 1 KM.

Gellet

Due to the recent ban on petroleum coke as a fuel, industries are facing a shortage of alternative fuels. They propose converting agricultural waste and manufacturing it into fuel pellets with an innovative business model implemented through a website which acts a bridge between industries and farmer

Irrigate

Physical fragmentation of land is currently a major problem. Farmers own a piece of land where he can cultivate certain crops. Considering we extract a couple of mass buyers or consumers for household purposes, we can bridge this gap between these producers and consumers by giving the land on lease to the consumers where the farmer receives the rent and cultivates certain crops/ provides poultary for the consumers.