Caltech: Embracing Facilities Technological Advances

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Summary:

A leader in higher education, the California Institute of Technology (Caltech) maintains an unfailing commitment to excellence. This commitment extends not only to education, but transcends every level of their organization.

To enhance stewardship of their state of the art facilities, Caltech needed a Facility Management Software to support their innovative practices and bring a configurable Integrated Workplace Management System (IWMS) to support their campus.

In 2015, Caltech was ready to usher in significant technological changes in their Facilities Department. After conducting both internal and external audits, the next steps were clear: **Caltech needed a Facility Management Software (FMS) to support their complex Facilities Management practices.**

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Challenges:

- Former IWMS was not configured to support Caltech's innovative processes or Facilities Management vision
- Staff was unable to easily pull desired metrics
- Outdated user interface was difficult to learn and use for some employees
- Demand maintenance process was highly variable
- Customers were frustrated with lack of information regarding work order status, timing, and billing
- No clear cut work processes

Challenges and needs:

While determining a solution, the team at Caltech worked with employees with a variety of responsibilities within the Facilities Management Department and determined the requirements for their new system.

Prerequisites for the new solution:

Seeking support for their innovative practices, the Facilities Management team decided to seek a fresh Facilities Management Software.

The department needed a solution which would:

- Support the Caltech vision
- Accommodate a comprehensive maintenance approach
- Support system integration
- Offer data accessibility
- Provide reliable service to customers
- Improve customer communications
- Offer excellent customer support
- Facilitate system integration
- Promote data accessibility

Challenges and Needs:

The staff needed a system which would enable them to:

- Prioritize work orders
- Build a multi-day schedule for performing work
- Order parts and materials in advance
- Communicate to the customer via the system
- Adopt a mobility solution
- Focus on assets

The Solution:

To create an outstanding experience for all involved, the team at Caltech sought a solution to support *all* software users - from the maintenance associates to the customers.

As Jim Cowell noted: **"The work we do each day impacts everyone on campus."**

After much collaboration, the selection criteria was established for the right Facilities Management Software.

> *"The work we do each day impacts everyone on campus."*
> *- Jim Cowell*

The IWMS selected by the team had to meet their department guideposts:

- Meet their unwavering commitment to customers
- Facilitate a focus on their three main tenants:
    - **Time:** Deliver when promised
    - **Dime:** At best possible price
    - **Shine:** With features and benefits expected
- Provide reliable predictable service to our customers
- Build a robust asset management system that creates an asset history
- Be better stewards of the campus facilities – a $2 billion asset

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Taking these factors into account, the team selected [AiM by AssetWorks](#) to meet the complex needs of their facility.

The customer-centric aspects of AiM made the comprehensive IWMS an ideal solution for Caltech, and AiM's ease of use and frequent work order status updates bolstered Caltech's commitment to excellence.

The IWMS held appeal as a comprehensive integrated solution for Facilities Management technology. The integration of an IWMS provided a singular campus management platform for the entire facilities team.

Implementation:

To guarantee a smooth launch, the team dedicated over a year to the software implementation.
Since every shop had their own methodologies, they had work together and create a single set of processes for using the system.

At the end of the year, AiM was setup to support Caltech's innovative practices and equip the facilities staff for success.

"Implementation is not the same as an installation. An implementation addresses user concerns and the human objectives." - Jim Cowell

Implementation:

However, the configured software was not the only benefit Caltech reaped from the process.
One of the greatest advantages of implementation presented itself in the midst of the process.

At the beginning of implementation, the department spent six months reviewing business processes. The thorough analysis provided key insights into the operations of the Facilities Department.

This review created the chance to define processes and create a structure for the software. The implementation offered the opportunity to take a look at the "why" behind their Facilities Management practices.

The team spent much of their time assessing asset groups and work order protocols as well as many of their most common practices. While tedious, the team was able to refine many procedures and boost department efficiency.

Training:

Employee-facing implementation began with clear communication between leadership and the employees in the field. This training was thorough and intense.

A key cornerstone of this process was weekly talking points which created a structure for helping employees engage with the implementation process and learn about the changes coming to the school.

AiM weekly meetings were established and covered topics like:

- How to build an asset inventory
- Establishing an asset data owner- an "asset czar"
- Location/space verification
- Collecting data requirements
- Developing a master list
- Developing communications strategies for work flow
- User acceptance testing plans
- Evaluating current asset data

These weekly meetings provided positive momentum and secured employee buy-in for the coming changes.

Beyond configuring the software, Caltech trained all department staff to effectively use the system come go-live day. The teams worked together to ensure a seamless transition for facilities workers the day AiM went live. Training for the use of both AiM and smart phones was a priority. Establishing staff familiarity with the software *and* their mobile devices was key for launch success.

Training:

In a herculean effort, the team ensured all staff received thorough training and demonstrated proficency *before* go-live day. Department staff were equipped with mobile devices and trained in the use of the technology before the go-live.

From fulfilling AiM specific tasks to using mobile devices efficiently, the team was imparted with the know-how for a successful launch. This allowed all workers to use their devices and AiM with complete confidence prior to the first day with the new software.

Avoiding downtime or rocky transition days, the in-depth training paid off.

To ensure a smooth transition during go-live week, a help desk was established for immediate help with AiM issues. However, thanks to the thorough training prior to launch, little assistance was required following the launch.

Post Launch:

The launch marked the beginning of a new level of excellence for the stewards of Caltech's facilities.

AiM now provides a reliable and predictable service to customers and offers a robust Asset Management System for the Caltech facilities. AiM implementation has freed the Facilities Management Department to rely on a single system for managing the facilities on their campus.

Within a month of implementation, AiM replaced three homegrown IT systems and dozens of Excel databases. The integrated platform now interacts with student affairs allowing for smoother and timelier communication. Work orders are no longer sent back and forth via email.

Other efficiencies gained:
Work Orders:
With their upgrade to AiM, Caltech is now equipped to send work order status updates to customers.
Customers now receive updates in various stages of their projects. They're informed when work orders are opened, scheduled, completed, and closed. They're also notified if their work order is delayed.

Within the months following the launch of AiM, Caltech has gained efficiencies and bolstered their customer service. As they continue to leverage the software, they'll continue to deliver outstanding levels of customer service.

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Post Launch:

Final outcomes:
- To date, four systems have been turned off, and a handful of stovepipe (standalone) systems have been integrated into AiM
- Daily wrench time for field techs has increased by 45 minutes thanks to mobile solutions
- Work orders are prioritized, customers receive updates on their work requests
- Transitioned from paper forms to a digital system
- Caltech is the first AssetWorks customer to bring the AiM reactor online (via AiM Energy Management)
- AiM is connected to building automation systems
- Control optimization has allowed:
  - Reduced lifecycle costs
  - Decreased energy usage
  - Improved occupant comfort
- Staff is fully trained in the use of AiM for their job
- Developed Asset Manager position
- Standardized set of systems for all properties
- Created a robust Asset Management System

About Caltech:

Caltech is a world-renowned research and education institution focused on science and engineering, where faculty and students pursue new knowledge about our world and search for the kinds of bold and innovative advances that will transform our future.

The scientific, engineering, and technological contributions of Caltech's faculty and alumni have earned national and international recognition, including 34 Nobel Prizes. Caltech's 300 professorial faculty members offer a rigorous science and engineering curriculum to approximately 1,000 undergraduates and 1,300 graduate students, providing one of the nation's lowest student-to-faculty ratios.

Caltech's 124-acre campus includes 4 million square feet of buildings and is located in Pasadena, California. The Institute manages the Jet Propulsion Laboratory (JPL) for NASA, and owns and operates large-scale research facilities such as the Seismological Laboratory and a global network of astronomical observatories that includes the Palomar Observatory and the W. M. Keck Observatory. Caltech is an independent, privately supported institution.

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About AssetWorks:

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AssetWorks develops Integrated Workplace Management Systems (IWMS) for organizations with heavy investments in Plant, Property and Equipment, as well as Construction Program Management and Energy Management solutions for higher education as well as state and local government customers.

With over 200 customers and 25 years experience in the field of facilities management, AssetWorks provides the expertise to meet the needs of your built environment.

To learn more about our facilities management solutions, send us an email: facilitysales@assetworks.com