

# ORACLE HIGHER EDUCATION CONSTITUENT HUB (HECH)

## KEY FEATURES

### CONSOLIDATE

- Integrate all constituent data using prebuilt, standards compliant business services
- Support common integration technology using prebuilt adapters)

### MASTER TRUSTED CONSTITUENT PROFILE

- Capture attributes and relationships for Constituent (Person), Institution (Account) and affiliations
- Track the source of Constituent attributes and view historical Constituent profiles

### GOVERN AND SHARE

- Manage privacy and regulatory policies using prebuilt rules and events
- Respond to Constituent lifecycle events with best-in-class workflow capabilities

### ENHANCE DATA QUALITY

- Identify duplicates using fuzzy matching techniques
- Enrich the Constituent profile using pre-built integration with external content providers
- Create the best version Constituent record using intelligent update, merge and unmerge capabilities

### WORLD CLASS PLATFORM

- Enterprise class performance, reliability and scalability
- Simple configuration and automated upgrades

*Higher Education Institutions face critical constituent data quality and duplicate management issues. The problem is compounded as the volume of this data continually grows and the number of disparate systems where this data is collected, tracked, and monitored, increases. Institutions need a way to maintain an accurate, single source of constituent data across the enterprise. Oracle's Higher Education Constituent Hub (HECH) enables higher education institutions to create a complete, authoritative, single view of their constituents including applicants, students, alumni, faculty, donors, and staff. It then feeds the numerous systems on campus with trusted constituent data.*

Oracle's Higher Education Constituent Hub is built on the highly scalable and widely deployed foundation of Oracle's lead Master Data Management platform, Siebel's Universal Customer Master (UCM). Extended and significantly enhanced for Higher Education, HECH's comprehensive functionality enables an educational institution to manage information over the full Constituent lifecycle: capture, standardize and correct names and addresses; identify and merge duplicate records; enrich the Constituent profile; enforce compliance and risk policies; and distribute the "single source of truth" best version Constituent profile to operational systems.



### A Consolidation Point For The Entire Enterprise

Constituent data is distributed across the enterprise among various systems (e.g. HR, Student Information, CRM, and Learning Management) across the Campus and all University locations. It is typically fragmented and duplicated across operational silos, resulting in an inability to provide a single, trusted Constituent profile to business consumers. It is often impossible to determine which version of the Constituent profile (in which system) is the most accurate and complete. The Higher Education Constituent Hub (HECH) solves this problem by delivering a rich set of capabilities, interfaces, standards compliant services and processes necessary to consolidate Constituent information from across the institution. This enables the deploying institution to implement a single consolidation point that spans multiple languages, data formats, integration modes, technologies and standards. Further, cleansed and standardized data can be synchronized across various systems on an as needed basis, in either batch or real time, significantly reducing expensive point to point integration between those systems.

### Master Trusted Information: Constituent Profile Management

To construct the best version Constituent profile, HECH provides a prebuilt and extensible Constituent profile management process. This process manages the steps necessary to build the trusted “best version” Constituent profile: identification, registration, cleansing (including name and address cleansing/validation), matching, enrichment, and linking. The steps allow you to build and maintain the single authoritative source of constituent data through

- Unifying person data continuously across the institution’s systems, such as one or more SIS, HR, CRM and other systems
- Rationalizing the person data to achieve the unique, complete and correct profile. This includes the ability to cross reference multiple records in various systems that point to the same individual, constructing a ‘master’ version of the record including a single linking ID across all systems
- Distributing the constituent data, such as campus ID, new address, name change, email updates, etc to all subscribing systems, such as Housing, Dining, Parking, Alumni, Financial Aid and so on.

The institution accrues many benefits from this single, authoritative source of truth about the constituent, beyond the obvious reduction in resources dedicated to integration of core constituent data. Using the more powerful searching capabilities within HECH, combined with the much broader population of constituents available to search against, the institution can reduce the number of duplicates added to any system; this is a significant time and resource savings for the institution. Other benefits that derive from a consolidated, accurate repository of person data include:

- Better service to constituents, through more accurate, complete and consistent information about them available in all campus systems.
- More success in communication and interactions with constituents, resulting in improved response rates, spanning the admissions to alumni/fundraising lifecycle.
- Lowered costs of managing multiple person directories and legacy ‘hubs’, eliminating manual processing of duplicate or overlapping records, and avoiding most point to point integrations which can be costly and unreliable.
- Improved security and regulatory compliance by feeding clean, consolidated constituent data to Identity Management systems as well as enabling compliance with statewide single ID mandates.

### Cleanse: Enterprise Data Quality and Address Validation

Centralizing the management of constituent data quality has always been a goal of MDM solutions. Institutions choosing to deploy Oracle’s HECH can choose between a data quality solution fully sourced from Oracle or a 3rd party. Oracle Data Quality solution comprises two preintegrated components: Oracle Data Quality Matching Server and Oracle Data Quality Cleansing Server. Using hybrid matching algorithms, Oracle provides a highly accurate matching server; Oracle’s PeopleSoft Campus Solutions customers can easily leverage this matching server integrated with their existing Campus Solutions Search/Match capability. Dubbed ‘extended search / match’, this capability leverages the ability of the existing CS Search/Match to include an external repository, such as HECH, in the search / match process. The result is significantly enhanced fuzzy search and match across all systems. Customers can also take advantage of third party data quality management via pre-integrated adapters.

Oracle Data Quality Cleansing server provides the ability to do full Postal address validation with unprecedented support for more than 240 countries. This includes the ability to cleanse, standardize and enhance current and historical constituent addresses using postal directories. In the US, this also includes the ability to

construct CASS-compliant addresses. Similarly, several other country-specific standards are supported. This support varies based on the standards established by the postal authorities of that country.

### **Govern and Share: Higher Education-specific pre-built Data Model**

The HECH data model is modeled after the extended Person data model in Campus Solutions and HCM. This prebuilt data model includes:

- Support for multiple constituent types: students, employees, alumni, teachers, workers, etc.
- Support for multiple Name, Address, Phone, and Email Addresses, for each constituent including persistence of effective dates for many attributes.
- Support for Affiliations which are assigned in Campus Solutions to indicate a person's role or roles within the institution.
- Extensible attributes, which are institution-specific. One of the many distinguishing characteristics of HECH is that such attribute extensions are configurations and not customizations. This becomes important when performing upgrades or updates to the HECH system in the future as such data model extensions are automatically preserved.

Once the institution has defined its policies around data ownership (governance), the next step is to define which systems are allowed to publish to the hub and which are recipients of updates to constituent data changes. At a more granular level, rules are defined to manage the survivorship of each data attribute from each participating system. The benefit of cleansing the data and managing the constituent profile in the hub is so you can provide that enriched, unified set of data to other systems in your campus ecosystem.

### **Lowered IT Operational Costs, Greater Agility**

HECH can significantly reduce IT costs by helping to sunset legacy systems, such as legacy 'hubs'. Data management costs are lowered too, with HECH's data steward, auto matching, survivorship and cleansing capabilities. These capabilities reduce the need for manual review of overlapping constituent records. Integration costs are lowered as well since HECH supports the new Campus Solutions Constituent Web Service (CWS) and its underlying data model. This results in straightforward integration with Campus Solutions, leveraging Fusion Middleware, any other SOA integration stack, or even point to point integration with PeopleSoft Integration broker.

Finally, the HECH architecture ensures quick and inexpensive upgrades. HECH itself is declaratively defined, and the resulting metadata is stored in a central repository. This metadata includes the business object model and the data entity model, allowing existing objects and entities to be extended, and new objects and entities to be created and linked to those objects already in existence. A major advantage of this approach is that application upgrades are simpler to undertake and to deploy. Therefore, Higher Education institutions can add campus- or institution-specific data elements, web services and methods and business rules without worrying about costly maintenance and upgrades.

### **Scalable, Service Oriented Architecture**

Over a decade, the platform underlying HECH has proven to scale to hundreds of millions of person records. Institutions can consolidate, cleanse, standardize and distribute data for many hundreds of millions of person records using this system. It is important to remember that while typical institutional enrollments range from a few thousand to a few hundred thousand, the person data in these institutions across all systems of record, can easily exceed 20-30 million records and this number grows continuously.

The HECH architecture and platform was designed to be object based, service

**KEY BENEFITS**

HECH manages an institution's operational constituent data. Specifically it stores and maintains the trusted, best version constituent profile. HECH also provides a centralized point for enforcing rules related to institution policies and governance

- A trusted, single source of truth for constituent information including relationships, hierarchies, and profiles
- Reduction in costs by centralizing the control and management of shared constituent information
- Provides the foundation for composite applications that require constituent information

**IMPACT ON THE BUSINESS**

The deployment of the HECH results in reduced duplicate records and improved data accuracy for all constituents. These changes will promote:

- Improved admissions yields
- Improved fundraising/friend-raising success
- Enhanced marketing to all populations, from traditional applicants, to Continuing or Adult Education
- Improved campus safety, due to better information about constituents
- Improved business process flow, including collections

oriented; and metadata driven. HECH includes SOAP/XML standards composite web services. These services enable HECH to better support end-to-end integration flows by eliminating effort required to build custom composite interfaces orchestrating multiple fine-grained web services. The Higher Education Constituent Hub provides over 100 prebuilt services, together with a set of adapters to support the most common integration technologies. Some of the prebuilt services include:

- Constituent Match/Fetch Services to enable powerful fuzzy search match from any system.
- Constituent Synchronization Services (including full support for the Constituent Web Service in Campus Solutions) to keep Constituent data in synch across all campus systems.
- Publish services to keep 'downstream' applications updates whenever changes occur in individual or sets of constituent records.
- Cross Reference Service to allow for the creation and use of system wide person IDs.

As more and more institutions embrace a full SOA-oriented approach to integration, where systems publish and consume durable and modular services, HECH's native Web Services support will drive down costs and improve overall IT systems reliability.

**Deployment Choices – Integration with Oracle's Campus Solutions**

Organizations have varying requirements when it comes to choosing how to deploy an MDM solution. The HECH is designed to support deployment in a heterogeneous IT environment – able to integrate with any Student or HRMS application; however, for those customers that want their Oracle Campus Solutions applications to be supported by these powerful data management capabilities, Oracle provides integration support between those two products. This support includes web services from Campus Solutions (CS), designed specifically to ensure constituent data is synchronized between the HECH and CS. Additionally, the Campus Solutions product supports the ability to search within HECH, directly from the CS application, so business users have a more powerful tool to detect and manage potential duplicate records. Finally, Campus Solutions and HECH support an extensible person attribute, called an "Affiliation" which allows the institution to define the roles an individual has within the campus; this Affiliation can be leveraged to feed downstream systems and processes, such as Identity Access Management.

**Higher Education Constituent Hub**

Oracle's Higher Education Constituent Hub enables higher education institutions to create a complete, authoritative, single view of their constituents including applicants, students, alumni, faculty, donors, and staff. As a result of cleansing the data and managing the constituent profile in the hub, you can provide an enriched, unified set of data to other systems in your campus ecosystem. The flow of higher quality data improves not only the personal interactions you have with your constituents but also enables a more robust integration infrastructure.

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