People Insights: Creating a Human Collaboration Experience

Cisco® Webex provides a human, intelligent, and flexible collaboration experience to help organizations foster employee engagement, work smarter and efficiently, and build high-performance teams across boundaries. By continuing to evolve the product portfolio and its features, Cisco aims to improve ease of use and, above all, to deliver additional functionality that further enhances the collaboration experience while improving productivity.

People Insights

People Insights, a new Webex® feature, allows you to foster better employee engagement and relationships by providing rich, contextually relevant, and professionally applicable information on the people in your Webex meeting with support for Webex Teams™ and devices in the near future.

This paper describes:

- The improvement opportunity
- People Insights feature
  - Functionality
  - Ease of use
  - Productivity gains
    - Benefits before, during, and after a meeting
    - Formal and informal information usage
- Data sources
- Data management
  - Security
  - Access and editing policies
  - GDPR conformity
- Frequently asked questions
- Conclusion

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The improvement opportunity

Successful collaboration hinges on the quality of relationships. But building relationships and discovering shared interests or goals takes time. In addition, participants don't always know the people they are meeting with and, as a result, important context is either missing or gathered during the interaction itself. In the worst case, this discovery never takes place among team members and can lead to poor team synergy, a lack of engagement, and subpar outcomes.

Further, the problem is exacerbated as meeting size grows, with participants unable to put faces to names and even leaving a meeting without not knowing who one or more participants were. This is a missed opportunity for all professionals and, especially, external-facing professionals (executives, sales people, marketers, etc.) whose very effectiveness relies on quickly understanding who they are meeting with and the ability to access quick and easy talking points to connect with individuals in order to move an initiative forward. As communication is a foundation of collaboration and productivity for all organizations, this frustration constitutes a broad opportunity for improvement.

People Insights

Functionality

People Insights empowers Webex users to see rich, contextually relevant, professional data on the people with whom they are interacting. Meeting participants may access profile data before, during, and after a Webex Meeting. The people profiles help users know who will be attending the meeting, who is currently in the meeting, and persons unexpectedly joining a meeting in progress–and not simply the person's name, but all available, contextually relevant data. Data types and acquisition are discussed in later sections of this paper, however, such data may include:

- What a meeting participant looks like (photos)
- Their professional biography and history
- Educational background
- Social and news references
- Contact information
- The company they work for, including information such as their company description, news, location, website address, stock price, financials, and funding history

This data is gathered from public sources and may be further enriched by the organization administrator enabling a corporate directory integration. In this case, people profiles will provide internal data on participants within the same organization, so that participants may easily access data about their colleagues, such as:

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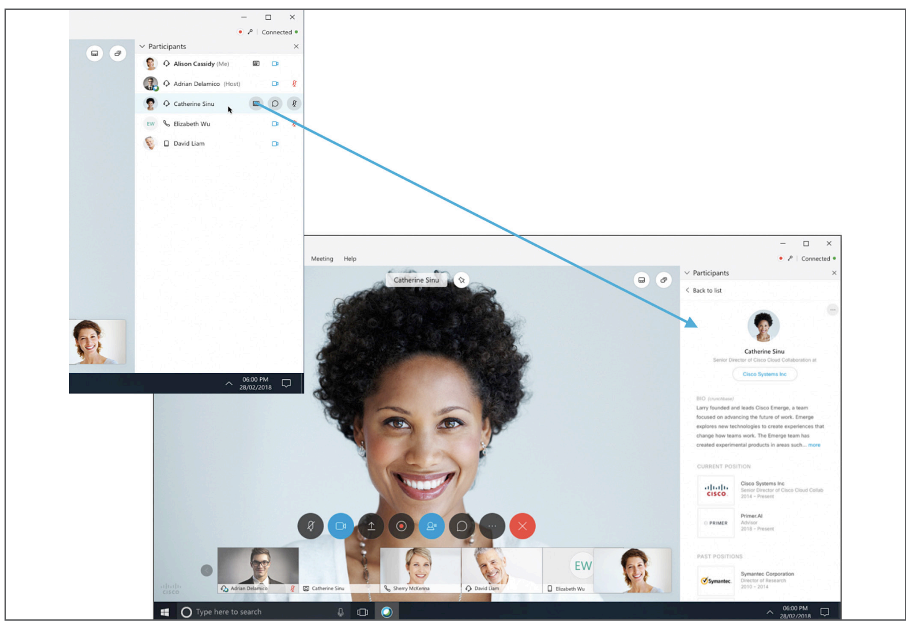
- Internal title
- Internal contact information
- Reporting structure

Note that for the time being we will only support displaying this data through Webex applications. We will not provide a public API for person or company data.

Ease of use

During a meeting, participants will see an icon beside the names of people on the participant list and video thumbnails for whom People Insights has a sufficiently rich profile. (Note, not all participants may have a profile. For example, if they have no publicly available online presence and do not have a title in their organization's corporate directory, then profile information won't be shown). If a user clicks on this icon, the target participant's email address is sent to the People Insights database and used to look up the person's profile. The sidebar then opens to display the People Insights profile of the selected person as well as the company they belong to (see Figure 1).

Figure 1. People Insights information display of a meeting attendee in Webex Meetings



This readily available access to profiles allows users to see available data on meeting attendees so they can research participants and understand important context during a meeting without ever leaving the flow of the meeting. Furthermore, if someone unexpectedly joins a meeting their information becomes instantly available.

Users have complete control over their profiles. They may access their profiles to edit, update, or delete their information (See figures 2 and 3). More information on how to edit profile information is available in the Data Management section of this white paper.

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Figure 2. Editing ability for an individual's People Insights profile. The user controls what gets shared

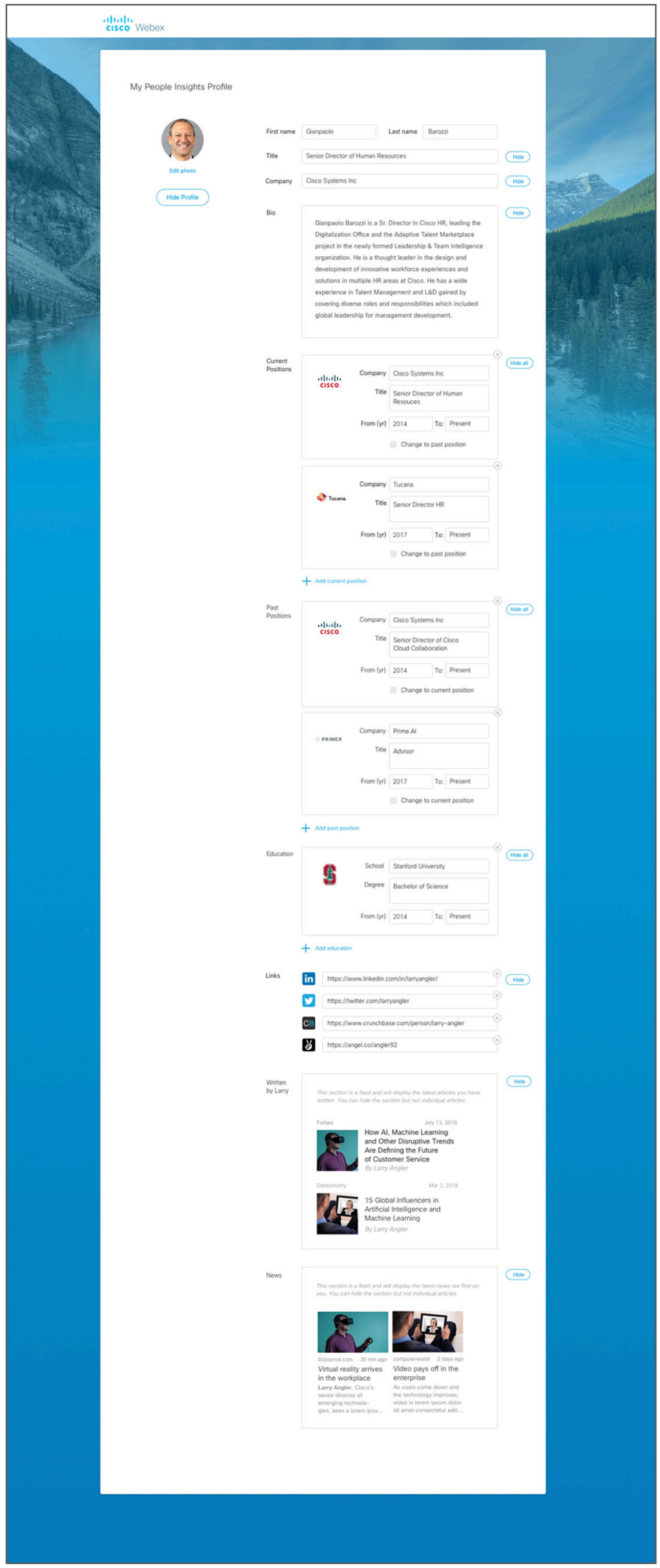

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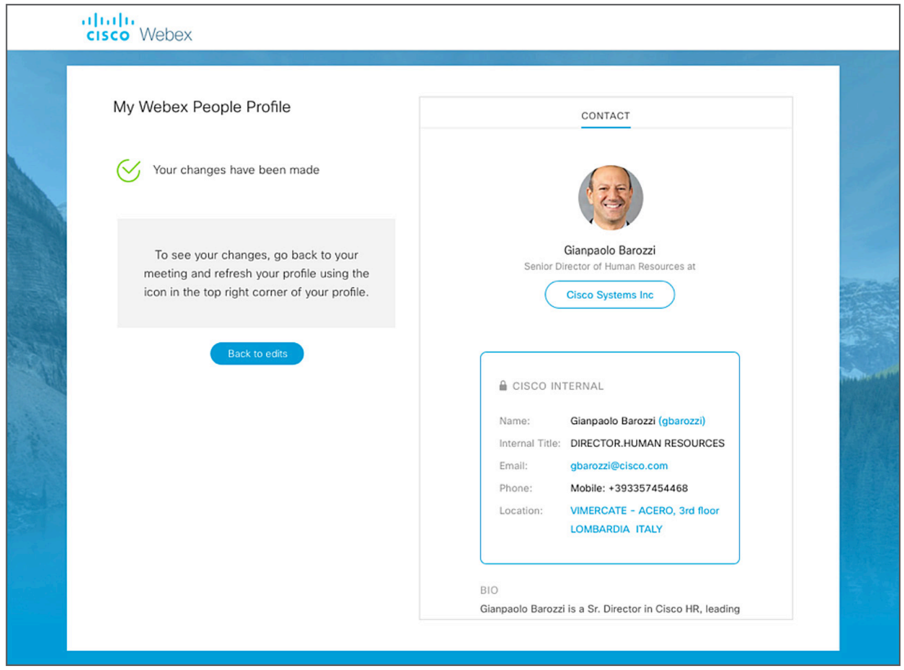
Figure 3. Example of a user updating their profile information



Productivity gains

Easy-to-use, readily available access to people profiles makes getting to know meeting attendees extremely easy. Such research may be undertaken:

- Before the meeting - Better understand the roles, responsibilities, and personal history of prospective participants, resulting in more effective icebreakers and clearer communication
- During the meeting - Understand participant roles or interests when pre-meeting research was not possible or an unexpected attendee joins. This can reduce time spent on introductions, data gathering, ramping up, and following up, which maximizes time spent on productive interaction
- After the meeting - Better target appropriate follow-up by having the context of who attended the meeting and the roles of the participants

As noted above, if an organization has elected to enable the corporate directory functionality, participants may access data about their colleagues, such as internal titles, internal contact information, and reporting structures. Hence, instead of having to pull up a separate page to look up meeting attendees in the internal directory to understand where they fit in to the larger organization, the data is readily presented at the click of a button.

Uses of the Information may be formal or informal. Formal uses assist in the immediate task, e.g., better understanding of roles and responsibilities. Informal uses include using serendipitous information such as schools or interests in common to build more personal

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connections. Developing one's personal and professional network is important both within and between organizations. Research indicates that increasing the reach and effectiveness of one's network is a major determinant of personal productivity and organizational effectiveness.

Both formal and informal uses of the information benefit collaboration efforts within an organization and meetings between organizations. Formal information, such as a colleague's location and contact information, can benefit all functions. Informal information, such as noting that a person has an interest in golf, or prior attendance at a university, or membership of a fraternity, can be of particular benefit to, for example, a sales associate looking for ways to relate to a potential client.

Because data is collected through automated means (see Public Data in Sources below), data is regularly updated to prevent staleness and to show the latest profile information without the user having to do so manually. Also, given the nature of the data collection, the profile contents are multi-sourced as opposed to other professional profiles (such as LinkedIn), which are single-sourced and reliant upon user updates.

Data sources

The People Insights profiles are made up from two primary categories of data: 1) Public data gathered from across the web; and 2) Corporate directory data (i.e. Active Directory).

Public data

In May 2018, Cisco acquired a startup called Accompany, an artificial intelligence company that built a proprietary data platform of more than 270 million people profiles and more than 20 million company profiles. This data constitutes the public element of the People Insights people profiles.

The Accompany public data is gathered by crawling billions of pages across the web, discovering pages containing professional information, and applying artificial intelligence algorithms to extract, label, and structure that data. All such collected data is run through a clustering process to determine which data points belong together as part of the same person's profile. For example, if there are 10,000 pieces of data labeled 'John Smith' we seek to determine which groups of data points belong together to create one "John Smith, the accountant" as distinct from a different John Smith – "John Smith, the engineer." Clustered data points are constantly combined, handling any conflicting information, to create our end result—a rich personal and professional overview combining disparate data sources from across the web.

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It is important to note that all webpages used in this way are fully publicly available. No LinkedIn data or any data that sits behind security barriers such as logins or paywalls is used in collating the public data, unless a user has explicitly logged in to a third-party integration to provide such access (i.e., Twitter).

When users interact with the People Insights feature, we also initiate a targeted discovery process to specifically enrich their profile and ensure we have discovered and ingested the most up-to-date public sources of data for that user.

Corporate directory data

Customers have the option to sync their corporate directory data to enrich their People Insights profiles. If they elect to do so, then Cisco will integrate with the customer's directory, combine it with the public data, and present an enriched profile. As noted earlier, if enabled, this functionality allows participants to see internal titles, internal contact information, and reporting structures only for colleagues at their own organization. If a meeting has external participants, they cannot access corporate data. In that case, they will only see publicly available information, and only if the participants have made their profiles available.

Data management

We understand the importance of privacy and security in any product that handles and displays data on people. To that end, we have taken measure to ensure that all data is stored and processed securely. We also emphasize that the end user is in control of their data.

Data storage and security

All data is encrypted, both in transit and at rest. The public and corporate directory data are stored in separate databases in separate virtual private clouds (VPCs) to ensure that there can be no unintentional overlap or integration of the data sources. Data encryption keys are managed through the Amazon Web Services (AWS) Key Management System (KMS). They remain in AWS and cannot be downloaded or exported, meaning that nobody has direct access to the keys; they are managed by a restricted set of engineers. The public and private data sources have separate keys to further ensure secure data separation. Data is end-to-end encrypted from server to browser.

Directory data will only be shown to other members of the same organization, maintaining data privacy.

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Personal data encryption

Table 1 outlines sources of personal data and how personal data is encrypted. Table 2 details the retention policy.

Table 1. Personal data processing and encryption

Personal data processed by	Type of encryption
Publicly available business and professional data	▪ SSL encryption for transit, AES 256 for storage ▪ Keys managed through AWS KMS
Host and usage information	▪ SSL encryption for transit, AES 256 for storage ▪ Keys managed through AWS KMS
Directory data	▪ SSL encryption for transit, AES 256 for storage ▪ Keys managed through AWS KMS
User-generated information	▪ SSL encryption for transit, AES 256 for storage ▪ Keys managed through AWS KMS

Table 2. Retention policy

Type of personal data	Retention period	Criteria for the retention
Publicly available business and professional data	Obtained from public websites – Indefinite Obtained through third-party APIs – In accordance with contractual requirements	Publicly available business and professional data is derived from public sources. It is retained indefinitely by default. Upon request, publication and links to source data can be suppressed and restricted from processing. As publicly available data originates from outside of Cisco Webex, any permanent changes or deletions must be addressed and requested with the primary source. At the request of users, the data can be archived in order to not appear. This allows for the data to remain permanently hidden rather than re-appearing with a new search after being purged previously.

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Type of personal data	Retention period	Criteria for the retention
Host and usage information	Active subscriptions - At customer's or user's discretion Deactivated accounts - Deleted within 30 days	Users can delete their host and usage information by opening a service request with the Cisco Technical Assistance Center (TAC). The requested data will be deleted from the systems within 30 days.
Directory data	Active subscriptions - At customer's discretion Deactivated accounts - Deleted within 30 days	Administrators can disable the Active Directory feature while still enabling People Insights. Directory data will be hard deleted in this case of deactivation. Non-directory data will remain, with the exception of name and email for users who had only directory data in their profile before the deactivation.
User-generated information	Active subscriptions - At customer's or user's discretion Deactivated accounts - Deleted within 30 days	Users can delete user-generated information from their profile at any time.

Data editing, updating, and deletion

There are three primary ways in which the data included in a person's profile may be updated:

1. The user updates their own profile. We allow users, once appropriately authenticated, to add, edit, or hide fields on their profiles.
2. The corporate directory data belonging to the company may change. If the directory of an organization changes (for example, an employee leaving, joining, or changing their title), these updates will be sent to Cisco and will in turn change the People Insights data. These updates will be processed within 48 hours. Individuals may not change directory data through this feature.

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3. New or updated data is discovered on the public web. The Accompany algorithms constantly explore the web, looking for new pages and for updated information on existing pagers. This data is ingested on a continuous basis. For example, if you were to speak at a conference and had a biography posted on the conference website, that bio and that conference talk might well be discovered and included in your People Insights profile.

While the underlying data sources may change, thereby updating a profile, ultimately, the user has full ability to edit or override that information. The automatic data updates serve only to ensure we are presenting the most complete and up-to-date profile possible without the users having to continually manually update their profile for any changed information. The one exception to this policy is news data. Users can hide news about themselves from their profile, but the People Insights feature does not allow editing of news.

In the case of data deletion, since all data displayed appears first in another source, we recommend you also correct data at its source (for example, if you no longer wish to be shown in your company's directory, you must work with your directory administrator on removing that data or hiding it from display). Regarding public data, i.e., data that has been obtained from a public source on the web, such as a company team page, users can hide any and all such data.

It is important to note that we hide the data from all view, rather than purging it from our systems to ensure that if similar data is discovered again, we hide that as well. For example, if you speak at a conference and post a biography, then choose to hide the biography in your People Insights profile, we must keep a record of that information so we know to hide if we find it from another conference page. This ensures data remains hidden more effectively and across a wider range of scenarios. If instead, a user wishes to have current profile data fully deleted from the system, any user may make this request at any time by opening a Cisco TAC case. However, note that having purged the data from the system, it may reappear if discovered again elsewhere on the web.

Once data is edited or hidden, the changes will be reflected immediately upon refresh of the person's profile. This is true for yourself and for any other users who may be looking at your information.

In creating these automated systems to discover and assemble person profiles we aim to make your life easier, but not at the expense of your autonomy. Our support team is happy to answer any questions or help with any data requests: simply send an email message to support@accompany.com.

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Conclusion

People Insights represents an easy-to-use feature extension of Webex Meetings. It is believed that the personal profile information will constitute a significant productivity gain for all classes of users, and it is expected that all classes of users will make use of the feature before, during, and after meetings.

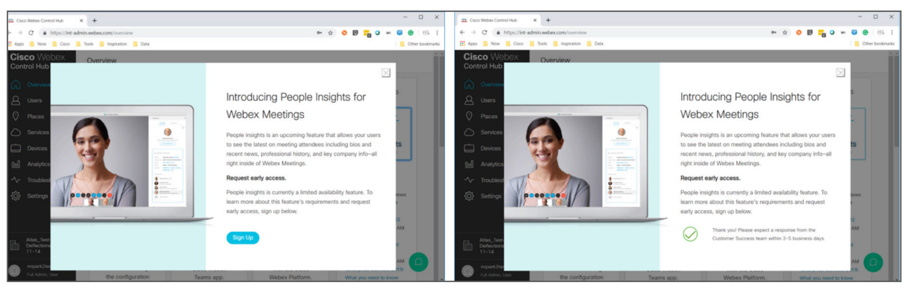
Frequently asked questions

What does my organization need to use People Insights? How do I turn on the feature?

The People Insights feature is turned off by default. Currently, there are several requirements to enable it. Customer requirements include:

1. U.S.-based cluster and English-speaking organization
2. Using Common Identity (either CI-enabled or CI-linked)
3. Enabling a corporate directory synchronization

If these requirements are met, then your site administrator can turn on the feature through enabling both ‘People Insights’ and ‘People Insights - Corporate Directory Sync’ via the admin console. Note that we currently require both to be enabled in order to allow access to the feature.



Do you use LinkedIn data?

We do not gather LinkedIn data as part of our data pipeline ingestion system. We have explicitly blocked our discovery mechanisms from obtaining data from LinkedIn. However, users may themselves upload CSVs of their LinkedIn contacts and we do accept LinkedIn data from that mechanism.

Which languages and regions do you support?

People Insight is currently only available for U.S. based customers. We currently support only the English language. Some data is obtained from other English-speaking nations. We anticipate expanding our non-U.S-English country coverage in the near future. Support for additional languages is planned.

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Can I download my data?

Webex users can download their data upon request. Individuals can receive a copy of their People Insights profile, including their self-generated information by opening a Cisco Technical Assistance Center (TAC) case or by sending an email message to privacy@cisco.com.

How do you respond to law enforcement requests for access to my data?

All law enforcement requests for data access are managed by the Cisco litigation team. Exposure is determined in case-by-case fashion.

Is this feature General Data Protection Regulation (GDPR)-compliant?

Yes, People Insights was designed with data protection and privacy in mind. Content in People Insights is derived from publicly available sources and user- and administrator-provided information. We provide links to the public sources, and offer users a view into their public presence and digital footprint. People Insights also includes functionality to honor data subject rights. As described earlier in this paper, users can easily access their profile and request edits, suppression (i.e., hide and restrict viewing), and deletion of inaccurate or irrelevant information about them.

Also see the Cisco Trust Center for additional information about Cisco data protection and privacy initiatives.

Where does my data reside geographically?

As we are launching only to U.S.-based organizations, data currently resides within the United States. However, with future international deployments, we anticipate storing data within the appropriate local geographic regions.

What control does a company have over company data or users in their organization?

A company can enable or disable the feature for all users within their organization. They may also choose to not sync their corporate directory data, however, this will result in the disabling of the feature. The intention is that user data must be editable by individual users so that users have final control of their personal data.

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