CAHRS Working Group
HR for Research
& Development

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Participating Organizations:

Apple
Amgen
Bloomberg
Boehringer Ingelheim
Bristol-Myers Squibb
Cornell University
Corning
Ecolab
General Mills
GlaxoSmithKline
HP
McKesson
Merck
MetLife
Microsoft
Nissan
Workday

Key Takeaways:

1. There are limited opportunities for Human Resources for Research & Development professionals to learn and share, coupled with a great hunger for ideas and insight. Participants see a strong need for this working group and see particular benefit and mutual learning from having representation from a variety of industries. While not all lessons are applicable, it is useful to see a broad range of alternative approaches to common HR challenges.

2. There are big unanswered questions related to basic HR functions – talent, compensation, performance management – for the R&D workforce. Future working groups will be organized around a single specific topic with the explicit goal of data gathering and benchmarking.

3. The best organizational structure and practices for accelerating innovation – standalone spinouts, centralized innovation laboratories, R&D integrated into business units, or innovation as a diffused cultural and organizational imperative throughout – are unknown and perhaps unknowable. We need to move towards aggregating lessons learned from different experiments and better understanding the HR implications of different organizational models.

4. Developing leadership and employee relations skills among technical talent is an opportunity area for HR – particularly in smaller and younger organizations.

Overview

This was the second HR for R&D working group. We took advantage of our west coast location to learn from Silicon Valley. We developed the agenda based on the needs and interests of participants. Some topics were deferred to future meetings. The day had four components:

- A presentation by a CAHRS company about a radical transformation of the HR function following a change in structure and leadership;
- A tour of the HP innovation center, including the original offices (maintained in museum style) of Bill Hewlett and Dave Packard;
- A brainstorming session to generate a laundry list of possible topics for the group to discuss; and
- Small group breakouts where subgroups worked to develop more specific themes and questions and for companies to find a compelling "success story" and a cautionary tale where lessons could be learned.
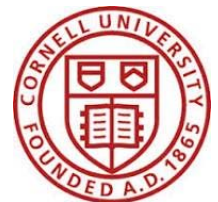
General Format

We organized our brainstormed list into four broad topical categories with a set of sub-topics.

* While this topic was identified in the initial brainstorm, the group decided to focus on the three others and did not pursue this topic further at this meeting. We intend to do so at a future meeting that will include experts on geographic strategy and workplace design.

There were clear overlaps across the topical areas. For example: One partner company described how moving into a dense cluster forced the organization to reconsider its willingness to offer retention packages. Another CAHRS member described how she had to rethink the company's use of non-compete agreements when it moved into a location where they were uncommon and typically not enforced. However, the group decided to organize into sub-groups to have in-depth discussions and identify specific success stories and examples where lessons were learned for each of the topics. The remainder of the report describes the outcomes of these discussions.

War for R&D and Technical Talent	Operating model and Organizational Structure for	Technical Careers	Locating Innovation *
• Recruitment • Incentives • Finding scarce skills • Anticipating future skills	• Choices of organization structure and where R&D sits • Challenges and opportunities of different structural choices • Mergers & Acquisitions • When and where to partner • How to think about	• Development • Feedback • Keeping people challenged, engaged • Alternatives to promotions	• Location strategy (in/out of a hub or cluster • Managing moves • Designing physical facilities • Co-located or Distributed • Results Only Workplaces

An important sub-theme was that skill needs were changing rapidly and difficult to forecast. As one participant reminded us, most of the jobs of the future don't exist today. Participants reported that digitization was leading to blurred boundaries across industries and that everyone was competing for scarce talent in data science.

War For Talent

All of the participants relied on a three-phase process of identifying the desired skills, locating talent pools, and then attracting the desired candidates:

But each of these phases had complexity:

- **Identifying desired skills**: Should the focus be on current needs, future needs, or the overall profile and fit?
- **Locating talent**: How are demographic trends and individual life stages shaping the availability of talent in different locations? Are people willing to move? Is it worthwhile to invest in relocation packages? Should firms be seeking talent externally, or growing it internally?
- **Attracting talent**: Should firms emphasize pay and rewards, or the work environment and culture?

There was consensus that firms would benefit from more diversity and also consensus on the difficulty of finding and attracting women and underrepresented minorities in technical fields. One firm described a partnership with the local public school system where they were investing in developing Science, Technology, Engineering and Math talent at the earliest levels of education in the hope of building a more diverse local talent pool.

Most of the firms continued to do targeted on-campus recruiting, but also described how they were diversifying the set of campuses they recruited from. Several mentioned a strategic focus on local hiring to save on relocation costs.

Talent Success Story: As part of a strategy to emphasize the culture and working environment, one of the participating companies described a campaign of "Stay Stories" where they featured interviews with employees who had opportunities to leave, but decided to stay.

Talent Lessons Learned: A traditional manufacturing company described an effort to "be more like Google" that included repainting walls bright colors and bringing in recreation equipment in an effort to both change the culture and attract younger technologists. The effort did not lead to the desired cultural change – or enhance the firm's attractiveness to potential recruits because "we were trying to be something we were not."

Operating Model/Organizational Structure

A key insight from this discussion was the need to somehow achieve balance between the "innovators" (those who invent) and the "implementers" (those who commercialize). This led to three related conversations: governance and decision making about innovation activities, funding for innovation activities, and the role of the Chief Technology Officer:

Governance and Decision-Making

Overall, there seemed to be less concern with the invention/ideation stage of innovation work. Firms had developed many techniques – sprints, design-thinking workshops, acquisitions. The bigger challenge was in the next stage of development.

Several organizations described situations where there were too many potential products and too few resources to pursue/commercialize them all. Who makes the call on which ones proceed, when is that call made, and how can firms "celebrate" things that are not pursued?

Funding

There were two different funding models discussed: one where the board decides the overall resources that are allocated to the central innovation unit, another where business units contribute proportionally. The former seemed to create less discontent than the latter.

CTO Role

Not all organizations had a central CTO and among those that did, the role differed from being a technical authority/gatekeeper versus a liaison or technology broker who worked to bridge across units.

Operating Model Success Story: One organization described a reimagining of the CTO role to shift from gatekeeper to more of a liaison. Rather than having business units come to the CTO organization with problems that need to be solved, the CTO spent time in the business units to learn more about their strategic direction and needs and was able

to identify opportunities where the deep technical experts could add value – often in ways that were otherwise unimagined or invisible. Another organization described a structural solution that created a bridging "interface" role. There was tension over physical facilities – that some new programs were privileged with new "fancy" facilities that created resentment across the organization.

Operating Model Lessons Learned: One organization described how a decision to build a new lab facility from scratch for a particular line of business led to resentment from other lines of business. This event begs the question "should the decision to update/upgrade equipment have been made with more input?"

Technical Careers

The group discussed three areas of concern:

1. We don't know what excellent scientific or innovation leadership looks like. It is difficult for non-experts to evaluate the technical talent; there does not seem to be a clear model for leadership behaviors; and particularly in settings with long development cycles, it can be difficult to observe performance outcomes.

2. There seems to be an overall lack of more traditional management/leadership skill within the R&D function. As one participant described, "R&D seems to get a pass on interpersonal stuff." Another remarked "It isn't clear how you inspire/engage technologists."

3. Some firms have "shape targets" – a desired distribution of employees across levels or pay grades. This puts pressure on the HR system. In flatter structures, there are artificial promotions. In steeper structures, the processes become unwieldy.

Careers Success Story: As a way of accessing and developing technical expertise, two organizations described variations of the same idea – putting together semi-formal "guilds" or "affinity groups" that came together around particular disciplines or types of expertise (e.g. thermal management) and were a problem solving resource. The benefit to these groups was that more people were exposed to types of problems, and junior people had opportunities to interact with and learn from more senior people. This was a path towards engagement and satisfaction as well as professional development that did not involve additional compensation or promotions or even formal oversight beyond email lists and access to space.

Careers Lessons Learned: One firm described a job architecture that created 'false' levels, titles and promotional guidelines that were invented to try to recognize/reward employees but ended up creating unnecessary bureaucracy, increased expectations for title changes, and got in the way of performance. The firm subsequently flattened and streamlined.

Another firm described the "shape targets" or "labor pyramids" which had been implemented as a cost control measure but ended up squelching upward mobility and growth, and increased attrition. They eventually moved away from these targets and managed costs through natural attrition and backfilling with early career hires.

This Summary Report was prepared by Diane Burton for use by participants of the HR for Research & Development Working Group.

The Center for Advanced Human Resource Studies (CAHRS) is an international center serving corporate human resources leaders and their companies by providing critical tools for building and leading high performing HR organizations. CAHRS' mission is to bring together Partners and the ILR School's world-renowned HR Studies faculty to investigate, translate and apply the latest HR research into practice excellence.

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