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Oregon Center for Cyber Excellence

The Oregon Center for Cyber Excellence's (OCOE) primary mission is to serve Oregon businesses, citizens and government agencies with awareness, prevention, management and security of cyber issues.

The OCOE is dedicated to improving Oregon's Cyber Resilience. It is not just about the hardware and software that combine to create IT-based Cyber-Security. Cyber Resilience requires the combination of awareness, education, preparation, risk avoidance and constant monitoring of this rapidly evolving threat.

> *"Cyber Resilience anticipates a degree of uncertainty: it's difficult to undertake completely comprehensive risk assessments about participation in cyberspace. Cyber resilience also recognizes the challenges in keeping pace with, or anticipating, the increasingly sophisticated threats…."*
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> STEVE DURBIN, CYBERCRIME: THE NEXT ENTREPRENEURIAL GROWTH BUSINESS?
> Information Security Forum, WIRED online, 2015.

The Cyber Center is a platform of services that cuts across the functional silos of government agencies. It supports aspects of missions at multiple state agencies: Consumer and business protection at DCBS; workforce development at OWIB/OED; fraud at DOJ; education and research at the HECC and STEM Investment council; and, IT security/effectiveness through the state's CIO.

It uses an extension model (e.g., agricultural extension and OMEP) and anticipates funding sources that include remuneration from state and federal government, private sector grants, and fee for services.

OCOE anticipates being an organizing force to make Oregon's educators, researchers, and technologists better able to identify, assess, and act to thwart threats. These activities require ongoing programs dedicated to continuous improvement in our tactics, techniques and procedures for defense and response. External funds are available to help with these efforts. Funds are available from federal sources and not-for-profit sources as well as local industry sources.

The federal government offers tens of millions of research dollars a year in the area of cyber-research and education. This research is split across multiple agencies and targeted toward the defined missions of each agency. The three big funding agencies are the Department of Defense, the Department of Homeland Security, and the National Science Foundation.

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- The Department of Defense funds research (through DARPA and the Military Services) to meet their specific areas of interest, but much of this work may not be well suited to a teaching institution or require access restrictions.

- The Department of Homeland Security has taken the lead in developing and sustaining programs to improve education and awareness. They fund technical research into new and improved solutions for cyber-security threats. They contract to create and disseminate validated educational and support materials through their outreach programs. In conjunction with these outreach programs they also provide grants and assistance to state and local agencies for implementation of specific outcome-based projects.

- The National Science Foundation has funded cyber-security research for many years across multiple programs areas. Their Secure and Trustworthy Cyberspace (SaTC) program alone funded over $125M in research in Fiscal Year 2014.[1]

While individual performers at Oregon Universities have been successful in securing these types of funding, the 2014 TAO study "A Cyber-Studies Strategy for Oregon" highlighted there is room for significant growth in securing these sources of funding. There is also a trend toward funding "systems" solutions (mostly through consortiums[2]) as evidenced in the recent $25M, five-year award to a university-led consortium focused on teaching the specific skills needed by the DoE National Labs (part of the consortium.) Looking forward, OCOE could help bring together regional educators, employers, researchers, and technologists to achieve this type of tailored "education-to-regional-jobs" solution for the Northwest.

OCOE will help solution-focused teams across the state collaborate to propose innovative solutions to more and larger federal contracting opportunities. The NSF SaTC solicitation seeks proposals of up to $3M (over five years) for innovative solutions to current and emerging challenges like securing the "Internet of things[3]." Proposals are due in the late fall (2015) for a spring or summer (2016) start. Proposals can also be submitted for research to the DHS or DoD broad agency announcements seeking innovative solutions[4].

OCOE will lead the efforts to secure and manage an Oregon-wide SaTC grant for their new "Transition to Education (TtE) mechanism." Per the solicitation, "Through TtE, research results in software engineering, science of cybersecurity, and designed in security will be moved into relevant course curriculum that will be implemented, assessed, and improved

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[1] NSF funding document. http://www.nsf.gov/about/budget/fy2016/pdf/41_fy2016.pdf

[2] Vice President Biden Announces $25 Million in Funding for Cybersecurity Education at HBCUs. https://www.whitehouse.gov/the-press-office/2015/01/15/vice-president-biden-announces-25-million-funding-cybersecurity-educatio

[3] http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504709

[4] http://tinyurl.com/k9xy3yc

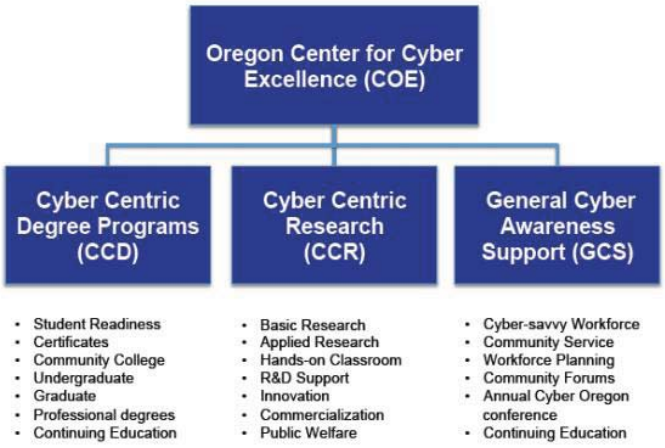
in a variety of settings." The grant would make it financially practical to ensure students are being taught to use the most recent insights and innovations.

Foundations and other non-governmental organizations also offer external funding potential for educational and research applications.

- Kauffman Foundation Innovation Fund America invests in efforts to help community colleges to support high-growth tech startups and entrepreneurs in their communities with seed-stage capital, high-impact mentorship, educational resources, and access to important networks[5].

- OCOE can pursue a relationship with The Bill & Melinda Gates Foundation to expand their Washington State education programs into Oregon. They fund innovative early learning and post-secondary education programs as well.

The OCOE has three primary functions:



- Advisory Services: Raising awareness about cyber risk and prevention and providing the expertise, tools and techniques to assess, plan, manage and respond to cyber issues within businesses and government agencies.

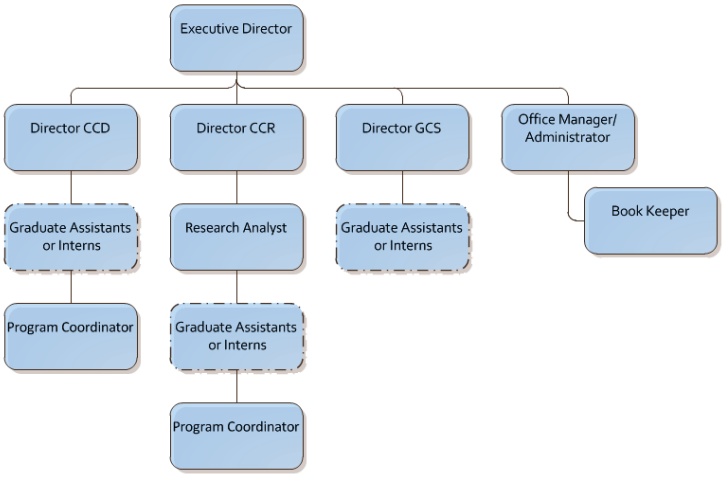
- Cyber-Savvy Workforce: Not only in specific technical programs, but in a variety of occupations that use and manage data. This applies to degree programs for new graduates and certificate and badge programs for existing workers.

- Research & Best Practices: To research new trends and breakthroughs in cyber security, building on Oregon's industry and university strengths and aligning with other national centers and federal efforts.

To support the growth, sustainability and success of the OCOE, the center's first year operating plan calls for the hiring of an executive director, a research (CCR) director for research and higher education coordination and a program (CCD) director to coordinate industry, government, justice and higher education toward improved curriculum and certification program development. The planning for the Center includes a comprehensive hiring plan (see attached), and it anticipates that after 12 months of operation the OCOE

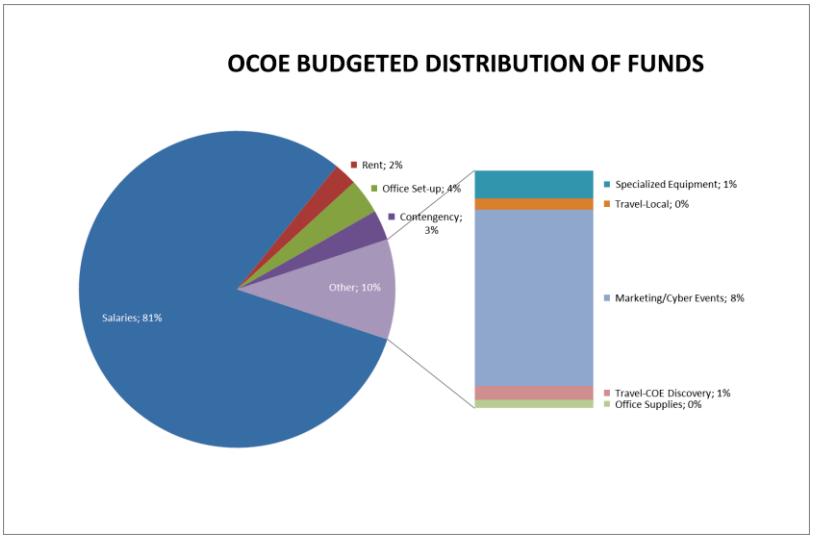
[5] http://www.kauffman.org/what-we-do/programs/entrepreneurship/innovation-fund-america

will hire the third director to manage advisory services and outreach (GCS). Additionally, as CCE and CCR begin to mature, two Program Coordinators will be added.[6] The OCOE also requires a full-time office manager/administration role. In addition to these permanent positions, the OCOE will utilize a part-time bookkeeper and hire interns and graduate assistants at various levels to explore best COE practices, trending and performance requirements.



The Executive Director's activities are similar to those of chief executive officers in corporate businesses. Their primary function is to act as a liaison with the board of directors, and involve industry and high education stakeholders with the rest of the organization. The OCOE Executive Director manages each of the three directors and is responsible for the program development, marketing, fundraising, HR management and accounting. In year one, the Executive Director will manage the community outreach, with graduate assistants and/or interns reporting directly to him or her.

The OCOE will not require significant office space in 2016-2017 as the majority of the work done by the directors will be in the field soliciting information and evangelizing the OCOE. Only simple computing hardware and business-suite software are required, along with the usual and customary productivity devices utilized by the staff and directors. However, the OCOE will work with Oregon cyber industry experts and the Technology Association of Oregon to evaluate, deploy and utilize state-of-the-art IT and Data Protection protocols.



[6] See OCOE Budget Summary

OCOE PROPOSED BUDGET SUMMARY

Title	FTE	Annual Salary	Monthly Cost	Term in Months	Total Cost
Executive Director	1.0	$150,000	$16,875	24	$405,000
Director CCD	1.0	$100,000	$11,250	22	$247,500
Director CCR	1.0	$100,000	$11,250	22	$247,500
Director	1.0	$100,000	$11,250	10	$112,500
Research Analyst	1.0	$72,000	$8,100	20	$162,000
Office Manager /Administrator	1.0	$48,000	$5,400	24	$129,600
Book Keeper	0.3	$37,500	$1,266	24	$30,375
Program Coordinator	1.0	$60,000	$6,750	22	$148,500
Program Coordinator	1.0	$60,000	$6,750	17	$114,750
Student Assistants	1.0 (4 @0.25 ea)	$52,800	$5,940	18	$106,920
					$1,704,645

June	$	23,541
July	$	23,541
August	$	46,041
September	$	76,551
October	$	84,651
November	$	84,651
December	$	84,651
January	$	91,401
February	$	91,401
March	$	91,401
April	$	91,401
May	$	91,401
June	$	67,641
July	$	67,641
August	$	78,891
September	$	102,651
October	$	102,651
November	$	102,651
December	$	102,651
January	$	102,651
February	$	102,651
March	$	102,651
April	$	102,651
May	$	102,651
	$	2,018,655

Salaries	$	2,018,655
Rent	$	59,220
Travel-Local	$	12,000
Travel-COE Discovery	$	15,000
Individual Equipment	$	30,000
Office Supplies	$	8,640
Marketing/Cyber Events	$	190,000
24 Months of Expenses	$	2,333,515
Office Set-up	$	90,000
Contengency	$	77,139
Total Program Cost	$	2,500,654

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Executive Director	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Director CCD			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Director CCR			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Director															1	1	1	1	1	1	1	1	1	1
Research Analyst					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Office Manager /Administrator	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Book Keeper	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Program Coordinator				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Program Coordinator								1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Student Assistants				4	4	4	4	4	4	4	4	4				4	4	4	4	4	4	4	4	4
Head Count	3	3	5	10	11	11	11	12	12	12	12	12	8	8	9	13	13	13	13	13	13	13	13	13