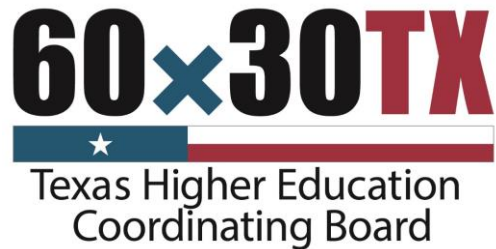Strategies to Incentivize IHEs to
Develop Degree Programs in
Cybersecurity

A Report to the Texas Legislature
Per Senate Bill 64, 86th Texas Legislature

In Collaboration with the
Department of Information Resources

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Texas Higher Education
Coordinating Board

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Senate Bill 64 – Incentivize Program Development

- **Senate Bill (SB) 64,** 86th Texas Legislature, Regular Session, required the THECB, in collaboration with the Department of Texas Information Resources (DIR), to explore ways to incentivize Texas higher education institutions to develop more certificate and degree programs in cybersecurity and to submit a report detailing strategies to the lieutenant governor, the speaker of the House of Representatives, the presiding officer of each legislative standing committee with primary jurisdiction over higher education, and each governing board of an institution no later than September 1, 2020.

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Methodology

- The THECB and DIR **conducted two surveys and a focus group session** in February 2020 to collect data on the development of degree programs in cybersecurity at Texas institutions of higher education (IHEs) and make recommendations to help incentivize the development of additional degree programs in cybersecurity.

- The THECB and DIR **identified 33 IHEs** in Texas that offer cybersecurity degree programs and their points of contact.

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Recommendations

- **Recommendation 1.** Provide state funding. Institutions with existing cybersecurity degree programs secured funding through external grants, institutional sources (tuition or department budget), or an industry partner. Institutions without existing cybersecurity degree programs stated that lack of funding (for labs, equipment, and qualified faculty salaries) is a major reason cybersecurity programs have not been implemented on their campuses.

- **Recommendation 2.** Create partnerships with industry. Institutions with industry partnerships indicated that local industry partners requested the programs due to market demand for cybersecurity professionals. To partner with local industries in their areas, institutions created advisory groups and committees to help address the need for cybersecurity degree programs and graduates.

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Recommendations

- **Recommendation 3.** <u>Develop standardized curriculum.</u> The National Institute of Standards and Technology released the National Initiative for Cybersecurity Education (NICE) framework that establishes a taxonomy and common lexicon for cybersecurity. Institutions should align curriculum with these established standards.

- **Recommendation 4.** <u>Ensure clear articulation pathways (high school to college).</u> Based on staff research, surveys, and the focus groups, the minimum requirement for entering the cybersecurity field and securing a financially stable job is at the certificate and associates degree levels. The THECB should work with the Texas Education Agency to develop articulation pathways from high school to college.

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