



**Flanders**  
State of the Art

# TECHNOLOGY SECTOR

## IN HOUSTON

FLANDERS INVESTMENT & TRADE MARKET SURVEY



////////////////////////////////////

# TECHNOLOGY SECTOR IN HOUSTON

August 2018

////////////////////////////////////

## TABLE OF CONTENTS

<b>1.</b>	<b>Greater Houston.....</b>	<b>3</b>
<b>2.</b>	<b>Key industries .....</b>	<b>3</b>
2.1	Aerospace technology	4
2.1.1	Investment landscape	5
2.1.2	Future predictions	6
2.2	Medtech	6
2.2.1	Investment landscape	8
2.2.2	Future predictions	9
2.3	Edtech	10
2.3.1	Investment landscape	11
2.3.2	Future predictions	12
<b>3.</b>	<b>Main players in technology.....</b>	<b>13</b>
<b>4.</b>	<b>Houston initiatives .....</b>	<b>14</b>
<b>5.</b>	<b>Startups in Houston.....</b>	<b>14</b>
<b>6.</b>	<b>Advice for Flemish companies .....</b>	<b>15</b>
<b>7.</b>	<b>Market research &amp; media resources .....</b>	<b>16</b>
<b>8.</b>	<b>Appendix.....</b>	<b>17</b>

[illegible]

## 1. GREATER HOUSTON<sup>1</sup>

Houston is the largest city in the Southern United States and the 4th most populous city in the entire U.S., with a census-estimated 2016 population of 6.77 million people.<sup>2</sup> The city is the most racially and ethnically diverse major metropolis in the U.S., surpassing Los Angeles and New York according to a report from Rice University in 2010.<sup>3</sup> With a large and growing international community, Houston has more than 90 foreign consulates and two international airports serving 198 international and domestic destinations.

If Houston were an independent nation, it would rank as the world's 30th largest economy. Belgium ranks as its 8th top export partner with a \$3,635 mil. export value in 2015.<sup>4</sup> The Port of Houston ranks first in the United States in international waterborne tonnage handled and second in total cargo tonnage handled. It is the 10th largest port in the world.

Nicknamed the "Space City" after NASA's Johnson Space Center, Houston is a global city with strengths in business, international trade, science, technology, medicine and research. Houston's economy has a broad industrial base in energy, aeronautics and technology industries. Leading in health care with the Texas Medical Center, the world's largest concentration of health care and medical research institutions, Houston has the second most Fortune 500 headquarters of any U.S. municipality within its city limits.

Houston's low after-tax living cost (9% below the nationwide average – consumer prices in Houston are 85.17% lower than in San Francisco<sup>5</sup>) attracts people with an entrepreneurial spirit and those who want to work at some of the country's largest companies. Houston has a large pool of talented workers: 31% or 1.3 million Houstonians are college educated. In 2015, Houston was elected the most favorable Metro for STEM<sup>6</sup> Workers nationally and second Metro in Engineers Per Capita.<sup>7</sup>

## 2. KEY INDUSTRIES

This is a snapshot of the technology industry in Greater Houston including its size, major players, influential organizations, incubators, accelerators, future predictions and influential initiatives.

<sup>1</sup> City of Houston <http://www.houstontx.gov/about/houston/houstonfacts.html> consulted on March 15, 2018

<sup>2</sup> Texas Department of State, Health service <https://www.dshs.texas.gov/chs/popdat/ST2016p.shtm> consulted on March 15, 2018

<sup>3</sup> "How Houston has become the most diverse place in America", LA Times, Brittney Mejia May 9, 2017 <http://www.latimes.com/nation/la-na-houston-diversity-2017-htmlstory.html>

<sup>4</sup> Houston Metro Export Plan, Global Cities Initiative [https://www.houston.org/assets/pdf/economy/Greater%20Houston%20Export%20Plan\\_web.pdf](https://www.houston.org/assets/pdf/economy/Greater%20Houston%20Export%20Plan_web.pdf) consulted on March 20, 2018 p.10

<sup>5</sup> Numbeo <https://www.numbeo.com/cost-of->

living/compare\_cities.jsp?country1=United+States&country2=United+States&city1=Houston%2C+TX&city2=San+Francisco%2C+CA consulted on March 20, 2018

<sup>6</sup> Science, Technology, Engineering and Mathematics

<sup>7</sup> Greater Houston Partnership <https://www.houston.org/assets/pdf/opportunity/Headquarters-General-Info.pdf> consulted on March 9, 2018

For further information about other key industries in this city, we urge you to visit our website or to contact Flanders Investment and Trade.

## 2.1 AEROSPACE TECHNOLOGY

Houston is home to the National Aeronautics & Space Administration (NASA)'s Johnson Space Center, a \$1.5 billion complex housing one of NASA's largest R&D facilities and a source of the nation's best high-tech professionals in science and engineering. It has primary responsibility for the research, design, development, and testing of the space shuttle. It also selects and trains astronauts and controls manned space flights. The complex is an international powerhouse of technological development, employing approximately 17,000 engineers, scientists, and administrative personnel. In 2014, Johnson Space Center managed an annual budget of \$4.42 billion, with little bit over \$2 billion of that expended on contracts with Texas-based businesses.<sup>8</sup>

Texas in general is known for being one of the most important locations for the global aerospace and aviation industry in the U.S.. The broad range of aerospace activities in Texas includes fighter plane and helicopter assembly, navigation instrument development, advanced space-flight research, military pilot training, and commercial space travel.

The aerospace and aviation industry directly employs over 184,800 Texas workers at 1,350 firms<sup>9</sup> and the state is one of the top three states for aerospace manufacturing jobs: 17 of the 20 largest aerospace manufacturers in the world, including Airbus, Boeing, Bell Helicopter, Textron, Gulfstream and Lockheed Martin, have major operations in Texas.<sup>10</sup>

- Rice University - Department of Mechanical Engineering
- The University of Texas at Austin - Department of Aerospace Engineering
- Texas A&M University - Department of Aerospace Engineering
- Texas State Technical College - Single largest provider of aerospace programs in Texas<sup>11</sup>

The traditional government-monopoly model of space travel has begun opening to the private sector, as startup companies have become capable of designing and launching competitive space systems. Examples of private companies operating in Texas are: Space Exploration Technologies (SpaceX), Blue Origin, XCOR Aerospace, Boeing's Crew Space Transportation (CST).

Texas aerospace industry 2013 data.<sup>12</sup>

Industry	Employees	Firms
Air Transportation	59,691	357

<sup>8</sup> NASA, Johnson Space Center [http://www.bayareahouston.com/Assets/jsc-overview\\_3.pdf](http://www.bayareahouston.com/Assets/jsc-overview_3.pdf) consulted on May 14, 2018

<sup>9</sup> Go Big in Texas, Aerospace, aviation and defense <https://businessintexas.com/sites/default/files/07/24/17/aerospace.pdf> consulted on May 14, 2018

<sup>10</sup> Aerospace Manufacturing <https://businessintexas.com/sites/default/files/07/14/17/profileaerospace.pdf> consulted on May 14, 2018

<sup>11</sup> Go Big in Texas, Aerospace, aviation and defense <https://businessintexas.com/sites/default/files/07/24/17/aerospace.pdf> consulted on May 14, 2018

<sup>12</sup> Go Big in Texas, Aerospace, aviation and defense <https://businessintexas.com/sites/default/files/07/24/17/aerospace.pdf> consulted on May 14, 2018

Airports & Other Air Transportation Support Activities	27,558	602
Aircraft Manufacturing	36,865	50
Aircraft Components Manufacturing	13,603	124
Guided Missiles & Space Vehicles Manufacturing	1,570	2
NA Search, Detection & Navigation Instruments	7,290	43
Satellite Telecommunications	623	53
Flight Training	2,986	74
Space Research & Technology	3,132	17

The largest subsector within the industry, is air transportation, which includes airlines, airport operations, and aircraft maintenance. The second largest subsector is aircraft and aircraft component manufacturing.

#### 2.1.1.1 Investment landscape

Texas state leadership works closely with the aerospace industry, other governmental agencies, and academic institutions to coordinate industry development efforts.

Some examples are:<sup>13</sup>

- Spaceport Trust Fund
- Texas Enterprise Fund
- Texas Enterprise Zone Program
- Manufacturing Exemptions
- Governor's University Research Initiative
- Skills Development Fund

Besides initiatives and support from Texas' leaders, the U.S. Department of Commerce's Economic Development Administration (EDA) awarded a \$1 million grant to the city of Houston to provide critical infrastructure in support of the Houston Spaceport education and incubation hub project. It is expected to create more than 300 jobs and spur \$12 million in private investment.<sup>14</sup>

Another Houston space tech program is the "The Commercial Crew and Cargo Program Office (C3PO)"<sup>15</sup>. The program invests financial and technical resources to stimulate the development of private transportation systems, ferrying both cargo and human crews to the International Space Station.

<sup>13</sup> The state of Texas, Go big in Texas - 2017 Texas Aerospace, Aviation and Defense [https://gov.texas.gov/uploads/files/business/aerospace\\_report.pdf](https://gov.texas.gov/uploads/files/business/aerospace_report.pdf) consulted on May 5, 2018

<sup>14</sup> U.S. Economic Development Administration <https://www.eda.gov/news/press-releases/2017/02/21/houston-tx.htm> consulted on May 5, 2018

<sup>15</sup> NASA <https://www.nasa.gov/offices/c3po/home/index.html> consulted on May 14, 2018

### 2.1.2 Future predictions

Texas is big in aerospace in general, while Houston and Johnson Space Center share a history of leadership in space innovation. The Johnson Space Center will lead NASA's International Space Station operations until 2020 and is responsible for the development of the Orion crew vehicle (part of NASA's effort to send humans to Mars by 2030).<sup>16</sup>

The two biggest trends Flanders Investment and Trade noticed are: commercial space flights and deep space transportation.

## 2.2 MEDTECH

The definition of "medtech" continues to evolve. This results in conflicting data about the size and value of the Medtech industry, as many researchers use different terminology and measure different components. In EY's Pulse of the Industry 2017 report,<sup>17</sup> the study authors noticed following key takeaways for medtech:

- "The US and European medtech industries returned to growth in 2016, as resurgent revenue and net income at pure play medtech companies and conglomerates alike helped the sector recover from a disappointing 2015. Overall, medtech revenue grew 5% to more than US\$364 billion in 2016, compared with a 3% decline the prior year."
- "Aggregate revenue for European medtech companies grew only 3% overall in 2016, with pure play medtechs (up 4%) once again outpacing conglomerates (up 2%), and commercial leaders growing more quickly than their smaller counterparts."
- "In the US, medtech pure play commercial leaders posted a solid performance in 2016, as revenue increased 9% for the group, driving overall revenue growth for US medtechs up 7%. Net income and market capitalization for the commercial leader cohort also jumped 9%. That same group poured 10% more into R&D in 2016 than the prior year."

	2015		2016		Change		%Change	
	US	EU	US	EU	US	EU	US	EU
Commercial leaders (pure plays)								
Revenues	116.3	64.4	126.6	66.8	10.3	2.4	9	4
R&D expense	7.9	4.0	8.7	4.0	0.8	0	10	0
SG&A expense	35.3	21.4	39.1	21.5	3.8	0.1	11	-1

<sup>16</sup> Go Big in Texas, Aerospace, aviation and defense <https://businessintexas.com/sites/default/files/07/14/17/profileaerospace.pdf> consulted on May 14, 2018

<sup>17</sup> EY Pulse of the industry 2017, as change accelerates, how can medtechs move ahead and stay there? [http://www.ey.com/Publication/vwLUAssets/ey-pulse-of-the-industry-2017/\\$FILE/ey-pulse-of-the-industry-2017.pdf](http://www.ey.com/Publication/vwLUAssets/ey-pulse-of-the-industry-2017/$FILE/ey-pulse-of-the-industry-2017.pdf) consulted May 9, 2018



Net income	11.5	6.3	12.6	7.6	1.1	1.3	9	20
Market capitalization	413.2	223.6	452.4	210.2	39.2	-13.4	9	-6
Number of employees	421,400	284,500	447,000	285,600	25,600	1,100	6	0
Number of public companies	43	18	42	19	-1	1	-2	6
<b>Non-commercial leaders (pure plays)</b>								
Revenues	13.3	5.5	13.3	5.1	-0.1	-0.4	-1	-6
R&D expense	2.7	0.7	2.5	0.8	-0.2	0.1	-9	22
SG&A expense	7.6	2.2	7.4	2.1	-0.1	-0.1	-2	-6
Net income (loss)	-3.4	-0.7	-3.1	-0.9	0.3	-0.2	-8	24
Market capitalization	65.7	24.1	59.8	27.3	-5.9	3.2	-9	13.3
Number of employees	53,600	23,100	50,900	23,700	-2,700	600	-5	3
Number of public companies	210	171	200	171	-10	-1	-5	-1
<b>Conglomerates</b>								
Revenues	81.6	66	85.2	66	3.7	1.5	5	2

Table 1: US and EU Medtech at a glance, 2015-2016 (US \$b.)

*Numbers may appear to be inconsistent due to rounding. Other than revenues, all numbers have been reported for non-commercial pure-plays. Market capitalization data is show for 31 Dec. 2016 and 31 Dec. 2015.*

Houston's biggest life sciences asset is the Texas Medical Center (TMC). With 1,345 total acres and \$25B in GDP, TMC is the 8th largest business district in the U.S. and the largest medical complex in the world. The center is home to the world's biggest children's hospital, Texas Children's Hospital, and the world's largest cancer hospital, the MD Anderson Cancer Center. Biggest biotechnology firms based in Texas are: Kimberly-Clark, Celanese, Acclivity, Greatbatch, Cyberonics.

Today, TMC is Houston's largest employer with more than 106,000 employees.<sup>18</sup> Its extensive campus comprises: 21 renowned hospitals, 14 support organizations, 10 academic institutions, eight academic and research institutions, seven nursing programs, three public health organizations, three medical schools, two pharmacy schools and a dental school.<sup>19</sup>

With its highly international customer base, owing to Houston's diversity and global reputation, and overall national success, TMC has an estimated regional annual economic impact of \$20 billion<sup>20</sup> and

<sup>18</sup> Texas Medical Center <http://www.tmc.edu/about-tmc/facts-and-figures/> consulted on April 20, 2018

<sup>19</sup> Go big in Texas <https://businessintexas.com/sites/default/files/07/14/17/biotechreport.pdf> consulted on April 20, 2018

<sup>20</sup> The Tenant Advisor <http://www.coydavidson.com/houston/texas-medical-center-houston-healthcare-real-estate/> consulted on May 5, 2018

keeps on expanding. When completed in 2022, the new campus is expected to have a \$5.2 billion impact on the city of Houston and create around 30,000 new jobs.<sup>21</sup>

### 2.2.1 Investment landscape

With an emerging healthcare start-up dynamic in Houston, many initiatives were launched. The following list gives a short overview of the biggest incubators that created a close proximity with crucial connection points for entrepreneurs, scientists, and venture capitalists that previously did not exist in Houston. This focus over the last five years has created 175 startup companies in Houston (87 health tech, 42 med tech, 46 pharma companies).<sup>22</sup>

We will briefly discuss the biggest incubators in this chapter, but more information about investors etc. can be found in [Appendix 1](#).

#### **TMCx**

TMCx is the Texas Medical Center accelerator program designed to catapult the development of early-stage life science and digital health startups. The program supports entrepreneurs by providing all kind of resources for growth, including office and meeting space, training curriculum and an extensive advisor network comprised of business and legal experts, health care professionals and executives and investors. With the program the Texas Medical Center wants to become one of the world's premiere life science commercialization clusters. They have partnerships with Apple and some well-known corporate residents are Johnson & Johnson Innovation's JLABS and AT&T Foundry for Connected Health.

TMCx accepts companies into the TMCx program ranging from early stage startups to companies that are FDA-cleared. They opened in 2015 with a cohort of 21 companies. Three years later they hosted 108 companies from around the globe and the current cohort of 22 health tech companies is drawn internationally, with 20% coming to Texas from Silicon Valley.<sup>23</sup>

#### **THE CENTER FOR DEVICE INNOVATION<sup>24</sup>**

Johnson & Johnson started an initiative together with the Texas Medical Center to accelerate the development of medical devices. William Cohn (Cardiac surgeon and serial medtech entrepreneur) leads the Center for Device Innovation at Texas Medical Center. The center for device innovation will not only focus on internal research projects but will also work with external entrepreneurs. Innovators enrolled

---

<sup>21</sup> Houston Business Journal <https://www.bizjournals.com/houston/news/2018/04/23/photosnew-timeline-revealed-for-1-5b-texas-medical.html> consulted on April 24, 2018

<sup>22</sup> JLABS Innovation <https://jlabs.jnjinnovation.com/blog/houston-healthcare-start-ups-starting-achieve-escape-velocity-gravitational-pull-oil-gas> consulted on April 23, 2018

<sup>23</sup> JLABS Innovation <https://jlabs.jnjinnovation.com/blog/houston-healthcare-start-ups-starting-achieve-escape-velocity-gravitational-pull-oil-gas> consulted on April 23, 2018

<sup>24</sup> MedCity news <https://medcitynews.com/2016/10/jj-teams-texas-medical-center-create-medtech-incubator/> consulted on April 18, 2018 & Texas Medical Center <http://www.tmc.edu/news/2017/11/center-device-innovation-opens-texas-medical-center/> consulted on April 18, 2018

at the CDI will have access to the preclinical facilities of Baylor College of Medicine, Houston Methodist Research Institute, and the Texas Heart Institute.

## **JLABS**

JLABS offers a platform where emerging (pharmaceutical, medical device, consumer and digital health) companies can accelerate their scientific discovery. The program offers access to core research facilities hosting specialized capital equipment, educational programs, operational capabilities and a community of like-minded entrepreneurs. There are also opportunities with the Johnson & Johnson Innovation deal teams for venture capital funding, as well as the deal-making, therapeutic and technology area.

## **THE AT&T FOUNDRY<sup>25</sup>**

The AT&T Foundry creates an environment filled with AT&T innovators, industry technology providers, developers that helps startups move to the market faster. They have innovation centers in 6 cities around the world, and have started more than 500 projects and deployed dozens of new products and services since its inception.

### 2.2.2 Future predictions<sup>26</sup>

According to the Pulse of the Industry Report 2017, carried out by Ernest & Young, the future for the MedTech industry is bright. They predict there will be more demand as the use of digital products and data-driven services continues to accelerate. Other enabling technologies such as augmented reality (AR) and additive manufacturing (AM, or 3-D printing), are expected to play an important role in the medtech future as well.

As the worldwide population is aging, the need for consumer-focused platforms is growing. By 2050, the world's population over 65 is expected to triple, and the costs of treating chronic diseases will reach an estimated US\$47 trillion.

This could also be translated in a trend of product-centric medtech innovations bundled with services and solutions as real-time patient engagement, remote monitoring and more targeted care delivery. There is also an overall shift to value over volume. There is a clear demand for therapeutic focus and real-world data collection.

With the growing demand in medtechnology, cybersecurity will become a top priority. The growing connectivity of medical devices creates exposure to hackers (a scenario that could result in serious patient harm). Although the industry hasn't had any kind of these malicious attacks, yet, medical companies are already spending more time and money monitoring potential threats. Regulators and

---

<sup>25</sup> AT&T Foundry <http://about.att.com/innovation/foundry> consulted on April 23, 2018

<sup>26</sup> EY Pulse of the industry 2017 [http://www.ey.com/Publication/vwLUAssets/ey-medical-technology-report-2017/\\$FILE/ey-medical-technology-report-2017.pdf](http://www.ey.com/Publication/vwLUAssets/ey-medical-technology-report-2017/$FILE/ey-medical-technology-report-2017.pdf) consulted on April 10, 2018

policymakers are also increasingly focused on the issue: in May 2017, the U.S. Department of Health and Human Services said health cybersecurity was in “critical condition”.

The medtech industry is thriving in 2018, even as competition intensifies and customers grow more demanding. Medical technology companies will become more and more important and will find great opportunities in the healthcare future. A little hurdle on the road is the 2.3% Medical Device Excise Tax (MDET) that was reinstated on 1 January 2018 as part of the Affordable Care Act after two years of being suspended by the U.S. Congress.<sup>27</sup>

## 2.3 EDTECH<sup>28</sup>

We have to start this report with the note that data about the size and value of the edtech industry in the U.S. varies from source to source. The main reason for this is that the many researchers use different terminology & measure different components.

In 2016, the total U.S. edtech market was valued at \$33 billion and is made up of over 1,500 companies and 150,000 education apps. The industry is expected to grow to \$43 billion by 2019.<sup>29</sup> Apps are an important element of the edtech ecosystem, valued at \$2.5 billion in 2016 and expected to reach 5.8 billion by 2019. In 2016, pre-primary Education made up 40 per cent of the market; primary and Secondary Education 39 per cent; and Higher Education 21 per cent. The segments are predicted to stay fairly constant over the next three years.<sup>30</sup> The global market for digital services in education is predicted to be worth US\$130 billion by 2025.<sup>31</sup>

Texas is seen as an emerging hub for testing educational technology solutions. It's attractive to companies because of its low state tax rates and affordable real estate. Texas is home to 208 colleges and universities, including Rice University, the University of Texas, and Texas A&M. Another advantage is that school districts can apply to become a district of innovation (DOI).<sup>32</sup>

In mid-2017, Pitchbook<sup>33</sup> listed the top 10 states for capital invested in education technology since 2010. California ranked as the top state, with US\$2,903 million invested since 2010. New York was second with US\$890 million, and Utah third with US\$458. Other notable states include Washington DC and Virginia, which together had over US\$570 million, Massachusetts was fifth, with US\$250 million, Illinois had US\$155 million, and Texas with US\$151 million. Also in the top ten were Florida and Colorado.

<sup>27</sup> Internal Revenue Service, Medical Device Excise Tax: Frequently Asked Questions, <https://www.irs.gov/newsroom/medical-device-excise-tax-frequently-asked-questions> consulted April 10, 2018

<sup>28</sup> Australia unlimited, EDTECH US Snapshot <https://www.austrade.gov.au/ArticleDocuments/5085/Edtech-US-market-snapshot.pdf.aspx> consulted on April 9, 2018

<sup>29</sup> Technavio, Education Technology Market in North America 2015–2019 <https://www.technavio.com/report/north-america-education-technology-education-technology-market> consulted on April 9, 2018

<sup>30</sup> Technavio, Education Apps Market in the US 2015–2019 <https://www.technavio.com/report/usa-education-technology-education-apps-market-us-2016-2020> consulted on April 10, 2018

<sup>31</sup> Frost & Sullivan, Digital Disruption in the Global Education Sector <http://www.frost.com/sublib/display-report.do?id=MBCA-01-00-00-00> consulted on April 11, 2018

<sup>32</sup> Since 2015 Texas law allows several school districts to become Districts of Innovation (DOI) and claim exemptions from many state laws that affect public education. Innovation districts are allowed to operate in a similar manner as a charter school. More information about this topic can be found:

<https://www.atpe.org/en/DOI&TexasEducationAgency-DistrictsofInnovation>: [https://tea.texas.gov/Texas\\_Schools/District\\_Initiatives/DistrictsofInnovation/](https://tea.texas.gov/Texas_Schools/District_Initiatives/DistrictsofInnovation/)

<sup>33</sup> Pitchbook, US Edtech: The Next Chapter [https://files.pitchbook.com/pdf/Edtech\\_Graphic.pdf](https://files.pitchbook.com/pdf/Edtech_Graphic.pdf) consulted on April 11, 2018

### 2.3.1 Investment landscape

In 2017, US edtech companies raised \$1.2 billion across 126 edtech deals. The industry saw a resurgence after the little dip in 2016, when only \$1 billion was invested into 138 deals. The 2017 investment is the second-highest, following 2015 (\$1.4 billion).<sup>34</sup> The U.S. is the global leader in edtech fundraising from 2013 to 2016, accounting for 67 per cent of global edtech deals, followed by India and China at 6 and 5 % respectively.<sup>35</sup>

If we break down the funding by category we notice that there is huge growth in curriculum products and more recent growth in school operations. Most of the investments were in seed & angel companies, with 56 deals. Most money went to series C investments: 494.5M, followed by series A and B with respectively \$243.0M and \$159.3M.<sup>36</sup> The US has many accelerators exclusively focused on edtech companies or that have edtech as one of their focus areas.<sup>37</sup> More information about investors in Houston can be found in [Appendix 1](#).

Angel / Seed	Early Stage	Late Stage
<ul style="list-style-type: none"> <li>500 startups – 27 deals closed</li> </ul>	<ul style="list-style-type: none"> <li>Learn capital – 31 deals closed</li> </ul>	<ul style="list-style-type: none"> <li>Accel – 10 deals closed</li> </ul>
<ul style="list-style-type: none"> <li>Learn capital – 22 deals closed</li> </ul>	<ul style="list-style-type: none"> <li>Reach capital – 23 deals closed</li> </ul>	<ul style="list-style-type: none"> <li>Insight venture partners – 9 deals closed</li> </ul>
<ul style="list-style-type: none"> <li>Reach capital - 21 deals closed</li> </ul>	<ul style="list-style-type: none"> <li>Kapor capital - 22 deals closed</li> </ul>	<ul style="list-style-type: none"> <li>Firstmark Capital – 9 deals closed</li> </ul>
<ul style="list-style-type: none"> <li>Kapor Capital – 17 deals closed</li> </ul>	<ul style="list-style-type: none"> <li>Rethink education – 17 deals closed</li> </ul>	<ul style="list-style-type: none"> <li>Rethink education – 9 deals closed</li> </ul>
<ul style="list-style-type: none"> <li>Techstars – 12 deals closed</li> </ul>	<ul style="list-style-type: none"> <li>Greylock partners – 14 deals closed</li> </ul>	<ul style="list-style-type: none"> <li>Bessemer venture partners – 9 deals closed</li> </ul>
		<ul style="list-style-type: none"> <li>GSV Capital – 9 deals closed</li> </ul>

<sup>34</sup> Tony Wan, Fewer Deals, More Money: U.S. Edtech Funding Rebounds With \$1.2 Billion in 2017 <https://www.edsurge.com/news/2017-12-19-fewer-deals-more-money-u-s-edtech-funding-rebounds-with-1-2-billion-in-2017> consulted on April 11, 2018

<sup>35</sup> CB Insights, Ed Tech Deals On The Rebound, June 2017 <https://www.cbinsights.com/research/ed-tech-startup-funding-deals-dollars/> consulted on April 11, 2018

<sup>36</sup> Tony Wan, Fewer Deals, More Money: U.S. Edtech Funding Rebounds With \$1.2 Billion in 2017 <https://www.edsurge.com/news/2017-12-19-fewer-deals-more-money-u-s-edtech-funding-rebounds-with-1-2-billion-in-2017> consulted on April 11, 2018

<sup>37</sup> Pitchbook, US Edtech: The Next Chapter [https://files.pitchbook.com/pdf/Edtech\\_updated.pdf](https://files.pitchbook.com/pdf/Edtech_updated.pdf) consulted on April 11, 2018

### 2.3.2 Future predictions

EdSurge, one of the leading industry publications for edtech in the U.S., has spotted the “trends that fuel edtech innovation and investment” in 2017. In this section Flanders Investment and Trade will recap the trends briefly.<sup>38</sup>

- There is a need for better bandwidth to support the streaming demands of media-rich, 1:1 learning. More than 94% of schools are connected to the internet, but only 22% of them have enough bandwidth to support streaming demands.
- 1:1 (one device per student) is at 60% and growing rapidly. Main reasons are the combination of low-cost devices, an explosion of online learning content and ubiquitous connectivity.
- The most powerful AI tools improve on existing human processes and make workflows more efficient. The need for automation is more acute with large class sizes when the assessment and feedback demands on educators are heavy.
- The decline of the traditional publishers. Over the past 3 years, the S&P has been up 24%, but publishers Pearson and Houghton Mifflin Harcourt have been down 58% and 32% respectively. Barring a major change to the status quo in leadership, we anticipate this downward trend will continue. Marketplaces like TeachersPayTeachers and Nearpod will increasingly become the go-to place for educational content.
- One of the most unique and promising characteristics of technology is its ability to transcend physical boundaries and expand a learner's circle of supporters. Smart education technologies recognize that human emotion is tightly bound to the learning process, and the best tools are built around this reality.

Edsurge predictions for the future are based on an increased competition between educational institutions. First of all the improved options in education and the increase in investments in edtech, doubled the number of private equity investments in the past few years, and venture capital investments have also grown by over 50 per cent. This makes edtech a very interesting industry. Second of all, mobile devices are becoming more common in schools, as tablets are used in 85 per cent of K–12 school districts.<sup>39</sup> This will lead to a search for higher customer value in edtech and consequently a search for improving productivity, efficiency and cost management.

The second prediction is a focus on student's personal needs. We have already noticed a trend in more personalized learning and blended learning programs but the overall growth in distance learning in the U.S. (six million, or 30% of students enrolled in higher education are taking at least one distance course and the majority of these are undergraduate students<sup>40</sup>), shows us that students seek options that fit their financial, geographical and time needs. This will eventually evolve in more demand of easy access to online learning platforms etc.

---

<sup>38</sup> Edsurge, Spotting the 2017 trends that fuel edtech innovation and investments <https://www.edsurge.com/news/2017-11-17-spotting-the-2017-trends-that-fuel-edtech-innovation-and-investments> consulted on May 14, 2018

<sup>39</sup> LearnLaunch, 2016 Massachusetts Workforce Report [http://learnlaunch.org/wp-content/uploads/2016/09/Workforce\\_FullReport\\_FNL.pdf](http://learnlaunch.org/wp-content/uploads/2016/09/Workforce_FullReport_FNL.pdf) consulted May 9, 2018

<sup>40</sup> Digital Learning Compass, Distance Education Enrolment Report 2017 <http://digitalllearningcompass.org/download-report> consulted on April 16

Last but not least we expect an increase in virtual, augmented & mixed reality and adaptive learning over the next decades.<sup>41</sup>

### 3. MAIN PLAYERS IN TECHNOLOGY

Houston is home to the headquarters of 25 Fortune 500 companies. The most well-known ones are:<sup>42</sup>

### Phillips 66, ranked 34

Phillips 66 is a diversified energy manufacturing and logistics company with businesses in Refining, Midstream, Chemicals and Marketing and Specialties. They have over 140 years of experience and are represented globally.

Sysco, ranked 57

Sysco is a global leader in selling, marketing and distributing food and non-food products to restaurants, healthcare and educational facilities, lodging establishments and other customers around the world.

**Kinder Morgan, ranked 229**

Kinder Morgan is one of the largest energy infrastructure companies in North America. They own an interest in or operate approximately 85,000 miles of pipelines and 152 terminals.

Top B2B technology companies based in Houston are:<sup>43</sup>

## BMC

BMC is a global leader in innovative software solutions that enable businesses to transform into digital enterprises for the ultimate competitive advantage.

## CloudNine

CloudNine empowers legal and business professionals with eDiscovery automation software and professional services that simplify litigation, investigations, and audits for law firms and corporations. They offer expertise in simplifying and automating the discovery of data for audits, investigations, and litigation.

<sup>41</sup> QS, EdTech Investment and Venture Capital [http://www.reimagine-education.com/wp-content/uploads/2018/01/RE\\_White-Paper\\_EdTech-Investment-Venture-Capital-2.pdf](http://www.reimagine-education.com/wp-content/uploads/2018/01/RE_White-Paper_EdTech-Investment-Venture-Capital-2.pdf) consulted on April 16, 2018 & 11 Ed Tech trends to watch in 2017 <https://campustechnology.com/Articles/2017/01/18/11-Ed-Tech-Trends-to-Watch-in-2017.aspx?Page=1> consulted on April 24, 2018

<sup>42</sup> The Chronicle <https://www.chron.com/business/article/Houston-companies-on-Fortune-500-rankings-list-11202899.php#photo-10464750> consulted on May 15, 2018

<sup>43</sup> G2 Crowd <https://blog.g2crowd.com/blog/technology-research/houston-tech-companies/#change> consulted on May 15, 2018.



## 4. HOUSTON INITIATIVES

---

The primary City of Houston initiative for attracting economic growth is the Greater Houston Partnership<sup>44</sup>, dedicated to helping businesses interested in relocating or expanding their companies in the City of Houston.

### HOUSTON EXPONENTIAL<sup>45</sup>

HX was created by the Greater Houston Partnership's Innovation Round Table, Mayor Turner's Innovation and Technology Task Force, and the Houston Technology Center. By convening the ecosystem, helping to build an innovation district in Houston, attracting talent to the region and promoting Houston's image, both locally and nationally, as a vibrant, innovative economy where startups thrive, we will bolster Houston's innovation ecosystem and drive the region to become a top 10 startup ecosystem.

The HX Venture Fund will generate a compelling return for investors, attract leading venture capital firms to bring their expertise and risk capital to the region, and create a key pathway for innovation and information flow between corporations, startups and innovators.

### OFFICE OF THE GOVERNOR – ECONOMIC DEVELOPMENT AND TOURISM DIVISION

The Governor's Office of Economic Development and Tourism (EDT) serves as the state's leading economic development organization marketing Texas as the world's premier business investment destination. The division pursues business expansion and relocation prospects, with the goal of developing job creation and export opportunities for the Texas business community.

## 5. STARTUPS IN HOUSTON

---

Houston ranked in the top 10 for Business Facilities Magazine's Startup Activity 2017 report. The city has dropped from place 6 to 9, due in large part to its stagnation in startup density over the past decade and the nationwide trend of slowed startup activity in the last year.<sup>46</sup> One positive trend has been its high-growth company density (measured by the number of private businesses with at least \$2 million in annual revenue and three years of 20 percent annual revenue growth). From 2013 to 2015, Houston's high-growth density has increased from 81.5 to 112.4, according to Kauffman data.<sup>47</sup>

---

<sup>44</sup> City of Houston, Texas <http://www.houstontx.gov/ecodev/> consulted on March 20, 2018

<sup>45</sup> Houston Exponential <http://houstonexponential.org/the-hx-story/> consulted on March 20, 2018

<sup>46</sup> Houston Business Journal <https://www.bizjournals.com/houston/news/news-wire/2017/05/18/fewer-startups-more-diversity-in-u-s.html> consulted on March 20, 2018

<sup>47</sup> Houston Business Journal <https://www.bizjournals.com/houston/news/2017/05/19/houston-falls-in-rank-as-startup-hub-according-to.html> consulted on March 20, 2018



This drop doesn't mean that Houston is less attractive for startup activities. The Houston Angel Network (HAN) for example, is the oldest angel network in Texas and most active angel network in the USA. In 2015, HAN members invested \$12M in 43 deals.<sup>48</sup> The 2013 Halo Report found that the Houston Angel Network was ranked as the third most active angel group in the nation. This means that in the past year, the Houston Angel Network had the third most investment deals out of all the formal angel groups in the nation.<sup>49</sup>

A list of investors and incubators can be retrieved in [Appendix 1](#).

## 6. ADVICE FOR FLEMISH COMPANIES

---

Houston is already an established healthcare hub and the medtech industry is only growing. There are many initiatives that are willing to help grow startups in this sector. The medtech industry in Houston continues to grow and this offers opportunities for Flemish companies in other sectors, like cybersecurity, 3D printing or Augmented reality to sell solutions that serve health care customers.

The small language barrier, low cost of living and similar business etiquette between Flanders and Houston makes it a desirable location for Flemish companies planning their first office abroad. Houston's large consular corps and international population make it well-equipped to support the needs of Flemish startups or established Flemish companies opening an office.

Flemish companies whose customers are from the oil and gas or medical sectors are particularly encouraged to consider a prospecting trip to Houston.

### COST OF LIVING COMPARISON<sup>50</sup>

You would need around 7,859.96\$ in San Francisco, CA to maintain the same standard of life that you can have with 4,200.00\$ in Houston, TX (assuming you rent in both cities). This calculation uses our Cost of Living Plus Rent Index to compare cost of living. This assumes net earnings (after income tax).

- Consumer Prices in San Francisco, CA are 51.95% higher than in Houston, TX
- Consumer Prices Including Rent in San Francisco, CA are 87.14% higher than in Houston, TX
- Rent Prices in San Francisco, CA are 144.43% higher than in Houston, TX
- Restaurant Prices in San Francisco, CA are 25.55% higher than in Houston, TX
- Groceries Prices in San Francisco, CA are 82.56% higher than in Houston, TX
- Local Purchasing Power in San Francisco, CA is 22.95% lower than in Houston, TX

---

<sup>48</sup> Houston Angel Network: Most active network in the U.S. <http://houstonangelnetwork.org/han/> consulted on March 20, 2018

<sup>49</sup> Houston Business Journal [https://www.bizjournals.com/houston/morning\\_call/2014/03/houston-angel-network-cracks-the-2013-ranks-of-the.html](https://www.bizjournals.com/houston/morning_call/2014/03/houston-angel-network-cracks-the-2013-ranks-of-the.html) consulted on March 20, 2018

<sup>50</sup> Numbeo [https://www.numbeo.com/cost-of-living/compare\\_cities.jsp?country1=United+States&country2=United+States&city1=Houston%2C+TX&city2=San+Francisco%2C+CA](https://www.numbeo.com/cost-of-living/compare_cities.jsp?country1=United+States&country2=United+States&city1=Houston%2C+TX&city2=San+Francisco%2C+CA)

## 7. MARKET RESEARCH & MEDIA RESOURCES

---

We found following media and links to be very useful while conducting this study. They might help Flemish organizations to find more information about specific topics or the city of Houston.

### MEDIA

**Houston Chronicle:** the Houston Chronicle is committed to covering state, national and international news <https://www.chron.com>

**Houston business journal:** Houston's business newsweeklies <https://www.bizjournals.com/houston/>

**Edsurge:** reports on the latest news and trends in the edtech <https://www.edsurge.com>

**Tech Crunch:** online publisher of technology industry news <https://techcrunch.com>

### EVENTS - OWN WORDS

**Station Houston:** Station Houston is an organization that aims to transform Houston into a world-leading hub for technology innovation and entrepreneurship. On their website they offer a schedule of all events in Houston and they have over 350 members, including over 180 startups, 130 mentors, and dozens of high-impact strategic partnerships. <http://stationhouston.com/events/>

**Houston Hackathon:** The Houston Hackathon is a "civic" hackathon to solve problems that affect the greater public, such as traffic information, voter registration, or recycling programs, etc. <http://houstonhackathon.com>

**SXSW EDU:** The SXSW EDU is a component of the South by Southwest cluster. The conference hosts a community of optimistic, forward-thinking, purpose-driven stakeholders with a shared goal of impacting and innovating the future of teaching and learning. <https://www.sxswedu.com/about/>

### PEOPLE

Shelby Joe, publisher of Thesis and Co-Founder of Piqosity.com launched a edtech meetup group:<sup>51</sup> <https://www.meetup.com/nl-NL/edtechhouston/>

---

<sup>51</sup> Shelby Joe, Edtech Houston launches to promote Houston education technology, Thesis magazine (September 1, 2016)

## 8. APPENDIX

### APPENDIX 1: INVESTMENT LANDSCAPE

#### VENTURE

Mercury Fund	An early-stage venture capital firm. With over \$200 million under management, Mercury focuses on entrepreneurs and technology innovation originating in the U.S. Mid-Continent. Our investment themes target SaaS, Cloud, and Data Science/AI platforms that make the industrial ecosystems of Middle America more competitive and efficient. <a href="http://mercurymfund.com">http://mercurymfund.com</a>
--------------	---

#### PRIVATE

NGC Markets	NGC Markets focusses on helping investors safely grow their portfolio and private companies get the fresh capital they need to reach the next level. The team of globally recognized funding and investment experts helps startups reach their goals safely and securely. NGC's platform serves all industries, including technology, energy, heavy industry, consumer goods, and customer service. <a href="http://www.ngcmarkets.com">http://www.ngcmarkets.com</a>
Polus	Polus focuses on B2B companies that sell tech-enabled or managed services in healthcare and information-intensive industries. They provide between \$1M – \$5M to profitable and growing companies. Polus cares about operational, strategic, and psychological fit: <ul style="list-style-type: none"><li>• Operationally, our capital is for &gt;\$5M revenue companies who could be more profitable if they were not growing so fast.</li><li>• Strategically, the business has to be in an information-market with a service-related model and a clear growth opportunity.</li><li>• Psychologically, owners have to believe their equity is too valuable to sell, and are frustrated by equity and private and bank debt options.</li></ul>

#### ANGEL

Houston Angel Investors	Online platform that gathers jobs, investors and companies. <a href="https://angel.co/houston/investors">https://angel.co/houston/investors</a>
Houston Angel Network (HAN)	The Houston Angel Network (HAN) is the oldest angel network in Texas and most active angel network in the USA. Its members have invested more than \$73M in more than 235 deals since its inception in 2001.

	<p>HAN is a non-profit association that does not charge fees to entrepreneurs; its revenue consists of membership fees and sponsorships.</p> <p><a href="http://houstonangelnetwork.org">http://houstonangelnetwork.org</a></p>
Alliance of Texas Angel Networks	<p>The Alliance of Texas Angel Networks (ATAN) is a non-profit organization designed to increase the already high level of cooperation between many of the angel investors in Texas.</p> <p><a href="https://allianceoftexasangelnetworks.com">https://allianceoftexasangelnetworks.com</a></p>

#### STARTUP INCUBATORS & ACCELERATORS

TMCx	<p>The program provides startup companies with shared workspace, a curriculum tailored to the needs of health care entrepreneurs and the guidance of over 120 advisors from the front lines of the industry. Companies have access to the world's largest medical center, all without membership fees or equity sharing.</p> <p><a href="http://www.tmc.edu/innovation/innovation-programs/tmcx/">http://www.tmc.edu/innovation/innovation-programs/tmcx/</a></p>
Houston Technology Center	<p>HTC's facility provides a business environment and collaborative working space, with the added benefit of HTC perks.</p> <p><a href="https://www.houstontech.org/">https://www.houstontech.org/</a></p>
Station Houston	<p>Station Houston aims to transform Houston into a world-leading hub for technology innovation and entrepreneurship. This vision unfolds as a community where people live, work and play, with Station serving as the connective tissue fostering our culture of innovation.</p> <p>Their membership includes over 180 startups, 350 members, 130 mentors, and dozens of high-impact strategic partnerships with corporations that represent the key industries driving Houston's economy.</p> <p><a href="http://stationhouston.com">http://stationhouston.com</a></p>
Fruition Technology labs	<p>Launched in 2014 in the heart of the booming start-up hub of Houston, Fruition Technology Labs facilitates and nurtures the growth and advancement of Life Impact Innovations – a special group of startups that aim to make significant impact in the global commercialization of a business through the utilization of technologies.</p> <p>Their team of venture leads, collaborators and associates works closely with inventors at any stage of their business.</p> <p><a href="http://www.fruitiontechlabs.com">http://www.fruitiontechlabs.com</a></p>

