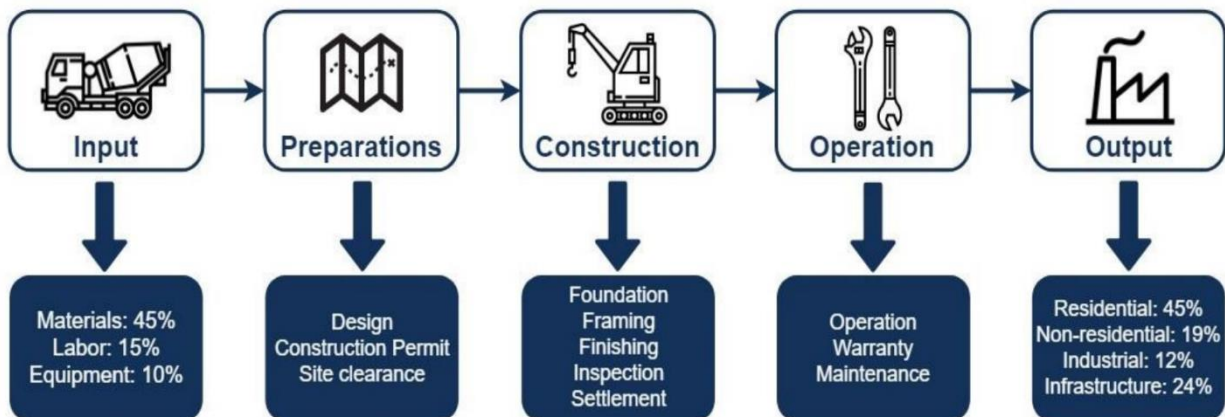


Chapter 1:

BUSINESS ANALYSIS DOCUMENT

1.1. BACKGROUND INFORMATION

- Field: Warehouse for construction material management
- Overview:
 - o **Input:** Construction materials: main input cost, makes up 45% of construction costs, among which steel accounts for 60 and cement 20%.

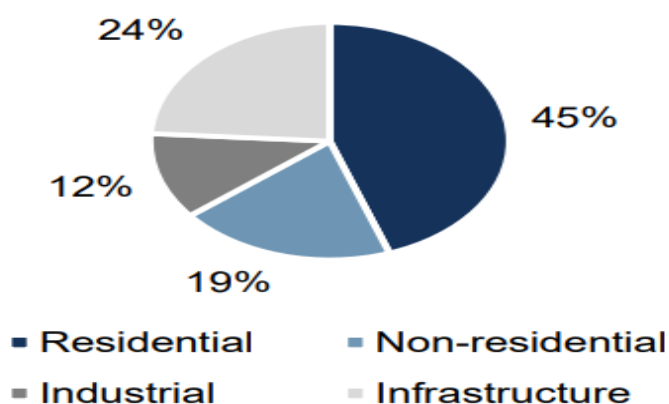


- o **Construction market in Vietnam** is highly fragmented and features intense competition because large number of companies, low barriers to entry, and similar construction techniques. At the end of 2017, there are 67,000 construction companies in Vietnam, making up 13% of total companies.

	State	Domestic private and public	Foreign
Foundation	- Licogi Corporation	- Fecon Joint Stock Company (FCN) - Minh Duc Cement and Construction Co., Ltd. - Phan Vu Group	- Bachy Soletanche Vietnam - Fico-Corea Construction Co., Ltd
	- Vietnam Construction and Import - Export Joint Stock Corporation (Vinaconex - VCG) - Lilama Corporation (Lilama) - 319 Corporation - Cienco 4 Group (C4G) - Song Da Corporation Joint Stock Company - Cofico Company	- Coteccons Construction Joint Stock Company (CTD) - Hoa Binh Corporation (HBC) - Phuc Hung Holdings Construction Joint Stock Company (PHC) - Delta Corporation	- Obayashi Vietnam Corporation - Sumitomo Mitsui Construction Co., Ltd. Maeda Vietnam Co., Ltd
Finishing		- REE Corporation (REE) - Searefico Refrigeration Industry Corporation (SRF) - VietREE Corporation - Hawee Joint Stock Company	- Kurihara Vietnam Co., Ltd - Taikisha Vietnam Engineering Inc Kinden Vietnam Co., Ltd

- **Output:** Construction output value reached 1,089 trillion VND in 2016, approximately 25% of GDP. Per our estimates, residential construction has the biggest share, next are infrastructure, non-residential and industrial.

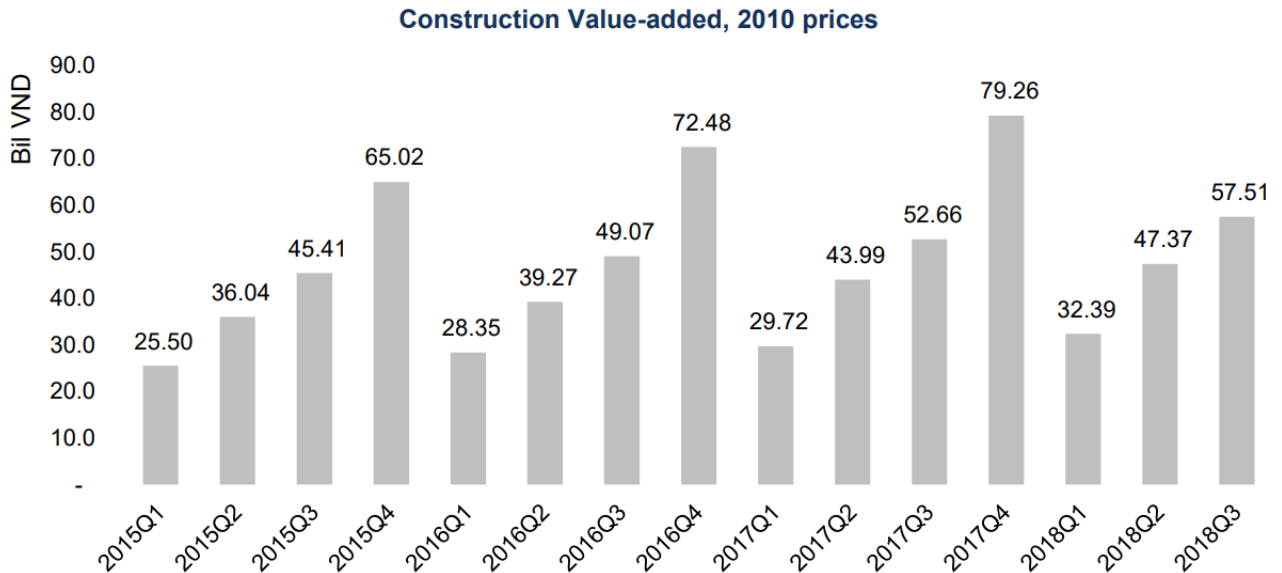
Construction Output Value



Source: GSO

- **Characteristics of Construction industry:**
 - Cyclical industry: short cycle, heavily influenced by real estate market.

- Seasonality: construction work typically concentrates in second half of the year



Source: GSO

- Construction works are heavily influenced by weather and Vietnamese habits: the third and fourth quarter are peak time for construction, many projects are started after Vietnamese Tet holiday and to be finished before the end of the year
- **Construction sectors Outlook in 2019:**
 - Infrastructure: slows down in 2019 due to structural challenges.
 - Residential and Non-residential: Real estate regulation efforts slowing down growth in 2019.
 - Industrial: Vietnam's potential to become the new industrial center in South East Asia promising a bright outlook in 2019.

1.2. ABOUT STACKHOLDER

- Company: Nam Xuan Phong Co., Ltd

- Website : <http://saevn.com>
- Main filed : HVAC systems for resident and industrial areas.
- Typical project: Bitexco Financial Tower, OPV PHARMACEUTICAL JSC, LIKSIN FACTORY, SAMSUNG ELECTRONIC VIET NAM FACTORY, . . .





- Project Sponsor: REDSUN M&E CONSULTANCY INC
 - o Website: <http://www.redsun.edu.vn/>
 - o Main field: consulting, designing, optimizing for construction, training architect and MEPF engineer, deploying BIM CENTER, . . .
- Mentor: Dr.LE HUNG TIEN
 - o Dean of Engineering Faculty – Van Lang University.
 - o Director of REDSUN.

1.3. BUSINESS OBJECT

- Refer to Warehouse Operation Document.

1.4. REQUIREMENT

- Refer to Software Requirement Document.

1.5. POTENTIAL

- Pros
 - Having a support from mentor and faculty.
 - Be trained and implemented into a real project.
 - A change to apply what school teach into real project.
 - Young.
- Cons
 - Many tool are allready have in market to managed warehouse.
 - No nothing about contruction field.
 - Hard to have a meeting with owner.
 - Young.

1.6. REFER

- Review 2018 and Outlook 2019 - FPTIS - Jan 2019