Supplier Market Analysis

2017 Report
Contents

Summary of supplier market analysis .................................................. 5

1. The Swedish Transport Administration's purchasing volume and the supplier market .............................................................. 10

2. Purpose and stakeholders ........................................................................ 13

3. The sector and market globally ................................................................. 15

4. The European construction and civil engineering market ......................... 16
    4.1 The construction market outlook in Europe ........................................ 19
    4.2 The construction market outlook in the Nordics .................................. 19

5. The Swedish construction and civil engineering market .......................... 20
    5.1 Size of the market .............................................................................. 21
    5.2 Suppliers in the construction and civil engineering market and their profitability .......................................................... 22
    5.3 Outlook and price trend for construction investments in Sweden .......... 22
        5.3.1 Investment index Roads and Railways ............................................. 22

6. The Swedish Transport Administration's supplier market, competition and price trends ....................................................................... 24
    6.1 Overall sector structure – civil engineering contracts market ............... 25
    6.2 Roads – market, competition and price trend ....................................... 26
        6.2.1 Investments ............................................................................... 26
        6.2.2 Maintenance on basic contracts, Roads ....................................... 26
        6.2.3 Other maintenance, Roads ......................................................... 26
    6.3 Railways – market, competition and price trend ................................... 26
        6.3.1 Investments excluding track, power, signal and telecom (BEST) ....... 27
        6.3.2 Investments in track, power, signal and telecom (BEST) ................. 27
        6.3.3 Maintenance in basic contracts, Railways .................................... 27
        6.3.4 Other maintenance, Railways ..................................................... 28
    6.4 Overall sector structure – engineering consultants .............................. 28
    6.5 Engineering consultants – market, competition and price trend ............ 29
        Engineering consultants – Roads ....................................................... 29
        Engineering consultants – Railways .................................................. 29
    6.6 Technically approved material – competition and price trend ............... 30
    6.7 IT – market, competition and price trend .......................................... 31
    6.8 Electricity – market, competition and price trend .................................. 31

7. The Swedish Transport Administration and the construction market – looking ahead ................................................................. 32
    7.1 The construction outlook and the Swedish Transport Administration's future purchasing volume ................................................ 33
        7.1.1 Measures planned by the Transport Administration 2018-2029 .......... 33
        7.1.2 The Swedish construction outlook .................................................. 34
    7.2 The Swedish Transport Administration’s efforts to increase productivity, innovation, competition and public benefit ....................... 36
        7.2.1 Procurement and project execution ................................................ 36
        7.2.2 The Swedish Transport Administration’s packaging of procurements .... 38
        7.2.3 Opportunities for small and medium-sized companies .................... 38
        7.2.4 Opportunities for foreign companies ............................................ 39
        7.2.5 Foreign companies .................................................................... 40
        7.2.6 Continual development of suppliers .............................................. 40
        7.2.7 Competition on equal terms and long-term sustainability ............... 41
        7.2.8 Governance and monitoring ........................................................ 41
        7.2.9 Purchase planning and communication ........................................... 41

8. Analysis and conclusions ........................................................................ 44
Summary of supplier market analysis

This report presents the Swedish Transport Administration’s supplier market analysis for 2017.

The Swedish Transport Administration makes purchases worth around SEK 40 billion a year

The Swedish Transport Administration annually purchases products and services for around SEK 40 billion. Only with an effective market are we able to continually create more value for money in terms of cost development and quality. This report analyses various submarkets, focusing in particular on the civil engineering market, which accounts for roughly 90 per cent of the Swedish Transport Administration’s purchasing volume.

The European construction and civil engineering market

The civil engineering market is in a process of internationalisation. Alliances, joint ventures and takeovers are creating an international market, and this applies to contracts as well as engineering consultancy services. Several of the biggest actors in the construction market are European, but recently Asian and American contractors have significantly increased their investments in Europe.

Many of the major consultancies active in Sweden are foreign-owned, including WSP, Rambøll, Cowi and Atkins (Atkins merged with SNC-Lavalin in 2017). American consultancies have established Swedish subsidiaries as a platform for their activities in the growing civil engineering market.

Large international contractors adapt to local business models and conditions. They operate in consolidated groups as well as in other forms of alliances, and establish subsidiaries in the countries they are focusing on. The Swedish Transport Administration’s experience from visits to various parts of Europe and completed procurements indicates that it is mainly Spanish, Italian, French and German contractors that are interested in projects in Scandinavia.

The profitability of construction and civil engineering companies

The profit margin of civil engineering companies has remained around 2 per cent over the last 5 years (statistics from the Swedish Construction Federation). It is significantly more profitable to build housing than infrastructure, but it is also often associated with greater risk. Profit margins for engineering consultancies have increased from around 5 per cent (2013) to around 7.5.

Civil engineering market and contracts – foreign companies continue to show interest in Sweden

The large, established Swedish construction companies dominate the civil engineering sector for road investments, investments in embankments, operation, tunnels and resurfacing. However, a number of foreign companies are challenging these traditional companies with regard to Transport Administration projects.
As there are potential suppliers for the Swedish Transport Administration within Europe and the world as a whole, a number of targeted efforts are being made to lower barriers to entry and attract foreign suppliers.

These efforts include visits by the Transport Administration to embassies and companies, organising international supplier days, packaging of contracts in the SEK 1 bn category into single contracts, translating executive summaries into English, and reducing the number of competition-restricting requirements. In recent years this has resulted in an increased number of foreign companies taking part in procurements.

**Civil engineering market and contracts – small and medium-sized companies**

The Swedish Transport Administration also simplifies the tendering procedure for small and medium-sized companies, where the challenge is largely an information issue. The Transport Administration has many smaller projects suitable for small and medium-sized companies, and it has special framework agreements for land contracts that are intended to allow smaller companies to learn the market.

**Civil engineering market and engineering consultants – companies are decreasing in number due to takeovers**

There is an international trend for larger companies to take over smaller ones, though in Sweden such mergers were somewhat fewer in 2017 than in 2016. Engineering consultants tend to have an ambition to grow ever larger in response to increased globalisation. Swedish companies are growing through takeovers, and are making inroads into new areas of competence as well as broadening their scope by moving out into the world in other ways. The size and complexity of projects in the civil engineering market are also driving this trend towards ever-larger companies; in order to deliver complete documents, specialist competence is needed in ever-more areas.

International actors, in turn, are making their way to Sweden. The trend is for an increasingly globalised market. Indeed, this trend towards takeovers is beginning to show itself in the Swedish Transport Administration’s procurements, with the average number of tenders decreasing to around 2.8 in 2017 from around 4 in 2014. In this respect, the Transport Administration faces a challenge in trying to attract more foreign consultants to the Swedish market in order to maintain competition.

**Competition is generally healthy in the market for technically approved material**

The market for technically approved material (for railways) is characterised by healthy competition between Swedish and foreign suppliers. There is an exception as regards spare parts for previously installed systems, where the Swedish Transport Administration is limited by a monopolistic situation.

**The Swedish Transport Administration purchases electricity via the Nordic electricity exchanges for maximum competition**

Electricity trading functions efficiently for the Swedish Transport Administration. All electricity is purchased via the Nordic electricity exchanges Nordpool Spot (for physical supply) and Nasdaq Commodities (for financial price hedges). Trading on an exchange maximises competition as all the actors in the market can participate.

Price trends in the electricity market have been favourable over the past year, meaning that current prices are relatively low. The price in Sweden has returned to a lower level and tracked the Nordic system price quite closely over the year. In an average year (in terms of water supply and temperature) the Nordic
market generates a market surplus, keeping prices at a relatively low level. The goal of the Swedish Transport Administration's electricity trading is for the price never to exceed the price budgeted for by the category team that the Transport Administration participates in.

**IT services are purchased mainly through framework agreements**
The Swedish Transport Administration has in several cases purchased intermediary solutions (often referred to as consultancy brokers), by means of call-offs from central government framework agreements. The Transport Administration uses framework agreements and central government framework agreements to a great extent. Growing IT needs mean that more resources as well as more comprehensive commitments are required. This has led overall to a reduction in the average number of tenders. The Transport Administration's requirement for comprehensive commitments from suppliers to improve efficiency means that the number of suppliers decreases, which is in line with the Transport Administration's strategy.

**Total construction investments are expected to be high in metropolitan areas**
The Swedish Transport Administration and other major clients have several large projects in the pipeline over the next few years, mainly in metropolitan areas. The Swedish Construction Federation's assessment is that total construction investments (housing, premises and infrastructure) will be high in the Stockholm/East Region and the West Region over the coming years. Overall, this may lead to fewer tenders, higher prices, a lack of quality, health and safety shortcomings, and skills and resource shortages. The Swedish Transport Administration is currently implementing a series of measures intended to mitigate the effects of such consequences, as described below.

**The Swedish Transport Administration’s efforts to increase productivity, innovation, competition and public benefit**
The Swedish Transport Administration classifies consultancy and contract procurements as type contracts or type projects. This classification is based on an assessment of complexity and uncertainty, and of the scope for freedom in execution.

Every type project or type contract has a specified overall strategy. This ensures efficiency when choosing the form of project or contract, remuneration, collaboration, bonus etc. Together with measures for promoting development, this creates conditions for increased productivity and innovation.

The Transport Administration’s focus is on selecting design-build contracts (where conditions for degrees of freedom are present) as the form of contract, and strive in these contracts to give a considerable degree of freedom, and have less control of the details. This is in order to increase suppliers' scope for profitability as regards method and product development.

The Swedish Transport Administration conducts active follow-up and development of suppliers. Evaluations of suppliers' deliveries may eventually become a basis for qualification of suppliers in procurements. The Transport Administration also carries out control and follow-up on societal requirements (taxes, minimum wage, child labour, health and safety, etc), minimisation of negative environmental and health and safety effects, and employment promotion measures to offer opportunities to people far removed from the labour market. Increased control and monitoring of contracts have also been introduced, through more stringent requirements and intensified follow-ups of clients’ and suppliers’ control programmes and
control plans. Control and monitoring become even more important in a strong market.

In a strong construction market it becomes important for the Swedish Transport Administration to:

• plan purchases
• have a long-term view when scheduling purchases
• package projects at an early stage of purchase planning
• distribute projects over time with reference to the market situation
• coordinate projects external to the Transport Administration in respect of tender dates
• market projects internationally
• lower barriers to entry for foreign companies and small/medium-sized companies
• guide and control deliveries (quality, health and safety)
• collaborate with the sector.
1. The Swedish Transport Administration’s purchasing volume and the supplier market
The Swedish Transport Administration’s purchasing volume is approximately SEK 40 billion per year. The overall distribution of this sum is shown in the table below.

In order for us to continually create more value for money (in cost development and quality terms), we need effectively functioning supplier markets. In its role as client, the Swedish Transport Administration must work in particular towards increased productivity, innovation, competition and efficiency in the markets for investment, operations and maintenance. The overall aim of the market analysis is to examine competition in the markets where the Swedish Transport Administration is active.

To continuously create more value for money, functioning supplier markets are needed.

### STA’s purchasing volume 2017 (SEK million)

<table>
<thead>
<tr>
<th>Activities covering all modes of transport</th>
<th>Total purchasing volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road</td>
<td>Railway</td>
</tr>
<tr>
<td>Investments</td>
<td>8,933</td>
</tr>
<tr>
<td>Maintenance</td>
<td>9,953</td>
</tr>
<tr>
<td>Other operations</td>
<td>815</td>
</tr>
<tr>
<td>Total purchasing volume</td>
<td>19,701</td>
</tr>
</tbody>
</table>

To continuously create more value for money, functioning supplier markets are needed.

- The purchasing volume from the Swedish Transport Administration's 10 biggest suppliers is SEK 21,894, which corresponds to 55 per cent of the total purchasing volume.

- The Swedish Transport Administration's 56 biggest suppliers represent 80 per cent of the total purchasing volume.

- The total purchasing volume for all modes of transport, as shown above, also includes IT for SEK 1,706 million, and technical services and consultants for a total of SEK 5,473 million (of which SEK 1,711 million for road, SEK 3,283 for railway, and SEK 479 million for other services).

- 735 procurements were completed in 2017. The total number of suppliers was 9,755.
2. Purpose and stakeholders

The purpose of this market analysis is to describe the function of different supplier markets, in particular the current state of competition, and to describe what the Swedish Transport Administration is doing to develop various submarkets. The report focuses on the civil engineering market since about 90 per cent of the Transport Administration’s purchasing volume is spent there.

The analysis is directed at the government and the Swedish Transport Administration’s board, management teams, internal council, client council, purchasing committee, category and supplier teams, administrators of main processes, heads of purchasing, purchasing controllers, qualified purchasers, supplier market actors etc.
3. The sector and market globally

Strong global growth, particularly growth in the euro area, is contributing to a very favourable Nordic civil engineering climate. Good macroeconomic development in the Nordic countries strengthens the prospects of the construction industry. The upturn in the Nordic construction market is broad, and the biggest obstacle to increasing production is the shortage of staff with adequate experience. This essentially applies across the Nordic countries.

Continuing urbanisation creates increased demand for complex infrastructure. Demand for sustainable building is also growing in a world increasingly aware of how human activity affects the earth’s habitats. All in all, clients and suppliers face considerable challenges going forward.
4. The European construction and civil engineering market
The Swedish Transport Administration has potential suppliers in the Euroconstruct market and is implementing a large number of targeted measures to attract foreign suppliers, see Chapter 7.2.4 Prospects for foreign companies. The Euroconstruct market comprises 19 European countries and includes almost all the Western European states (EU and EFTA) as well as a number of Eastern European states (EU candidate countries).

The total value of the civil engineering market in the Euroconstruct area was approximately EUR 308 billion (2017). Several of the world’s biggest contractors are present in the Euroconstruct market. Figures 2 and 3 below list the largest companies in 2015 and 2016.

The Swedish Transport Administration’s experience from visits to various parts of Europe, and of completed procurements, indicates that it is mainly Spanish, Italian, French and German contractors that are interested in projects in Scandinavia.

Chapter 7.2.5 Foreign companies contains information about foreign companies active in the Swedish market and what companies are showing an interest in the Swedish market.

The lists below show the largest European companies based on turnover

<table>
<thead>
<tr>
<th>Europe’s largest contractors based on revenue in 2015 and 2016 (EUR Bn).</th>
<th>Europe’s biggest design firms based on annual turnover 2016/2015.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>2015</td>
</tr>
<tr>
<td>Vinci (France)</td>
<td>38.5</td>
</tr>
<tr>
<td>ACS (Spain)</td>
<td>34.9</td>
</tr>
<tr>
<td>Bouygues (France)</td>
<td>32.4</td>
</tr>
<tr>
<td>Skanska (Sweden)</td>
<td>16.4</td>
</tr>
<tr>
<td>Eiffage (France)</td>
<td>14.1</td>
</tr>
<tr>
<td>Strabag (Austria)</td>
<td>13.1</td>
</tr>
<tr>
<td>Balfour Beatty (UK)</td>
<td>11.6</td>
</tr>
<tr>
<td>Ferrovial (Spain)</td>
<td>9.7</td>
</tr>
<tr>
<td>Koninklijke BAM Groep NV (Netherlands)</td>
<td>7.4</td>
</tr>
<tr>
<td>NCC (Sweden)</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Figure 2. Source: Europe’s largest construction companies based on revenue (fee-based), Statista. Figure 3. Source: Top 15 European design firms, based on annual turnover 2016, Linesight. Firms just shy of the top ten include COVIF and Systra.
The Euroconstruct market comprises 19 European countries.
4.1 The construction market outlook in Europe
The total investment volume in the civil engineering market in the Euro-construct area is expected to grow by about 4 per cent annually in 2018 and 2019. An historically large decline followed by a moderate recovery in the European construction market points to a continued European interest in the Swedish market. This may become somewhat harder to sustain, however, as the European construction market has shifted from significant decline to growth. The Swedish Transport Administration is now competing to a greater extent with foreign companies’ home markets, which are growing. See Annex 2 for more detail about civil engineering investments in Europe.

4.2 The construction market outlook in the Nordics
Current positive macroeconomic trends in the Nordic countries are having a positive effect on the construction industry. Thus the economic outlook is good, but the availability of labour is less so. All the Nordic countries report that the biggest obstacle to increased production in construction is that there is currently a shortage of workers with professional experience.

The investment trend in civil engineering is presented in percentage terms in Figure 5 below.

<table>
<thead>
<tr>
<th></th>
<th>Outcome 2016 (EUR Bn)</th>
<th>2016</th>
<th>2017F</th>
<th>2018F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>5.4</td>
<td>0</td>
<td>-4</td>
<td>4</td>
</tr>
<tr>
<td>Finland</td>
<td>4.7</td>
<td>11</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Iceland</td>
<td>0.5</td>
<td>83</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Norway</td>
<td>11.5</td>
<td>13</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Sweden</td>
<td>9.3</td>
<td>6</td>
<td>-1</td>
<td>4</td>
</tr>
<tr>
<td>Total, Nordics</td>
<td>31.3</td>
<td>9</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Figure 5. Trend in civil engineering investments. F means forecast. Source: Nordisk byggkonjunktur 2017-2018, Swedish Construction Federation.

The Swedish Transport Administration competes with other Nordic projects to a great extent.
5. The Swedish construction and civil engineering market
5.1 Size of the market

According to the Swedish Construction Federation, the Swedish construction market has an annual turnover of around SEK 700 billion. About SEK 500 billion of this is in total construction investments, i.e. new construction and conversions of housing and premises, and investments in infrastructure.

In recent years civil engineering investments in Sweden have turned over around SEK 90 billion annually (according to statistics from the Swedish Construction Federation). The civil engineering sector comprises roads, streets and railways as well as power stations and heating plants, waterworks and waste water treatment plants, construction related to transportation and to postal and telecommunications. Considerable resources are spent in the civil engineering market on the maintenance and repair of installations. The Swedish Construction Federation’s estimate is that the figure is between SEK 25 and 35 billion per year. This puts the total annual turnover in the civil engineering market at around SEK 110-120 billion.

The biggest construction and civil engineering consultancy groups

Sweden’s ten biggest groups of companies in construction, by turnover, are listed below (2016, Swedish Construction Federation):

1. Peab
2. Skanska
3. NCC
4. JM
5. Veidekke
6. Svevia
7. Erlandsson Bygg
8. Bonava
9. Serneke Group AB
10. Infranord

The ten biggest consultation groups in construction, civil engineering and multidisciplinary operations, by turnover (2017, Swedish Federation of Consulting Engineers and Architects):

1. ÅF
2. Sweco
3. WSP Sverige
4. Sigma
5. Ramboll
6. Tyréns AB
7. Cowi AB
8. Projektengagemang
9. Struktorgruppen
10. Bjerking

The Transport Administration buys investment and maintenance for around SEK 35 billion, which represents around 30 per cent of the construction market.
5.2 Suppliers in the construction and civil engineering market and their profitability

The profit margin of engineering consultancy firms (net profit/loss for the year divided by net turnover) has been between 5.5 to 7.5 per cent over the past 5 years (statistics from the Swedish Federation of Consulting Engineers and Architects).

Construction contractors’ profit margin has been between 8 and 10 per cent over the same period (Swedish Construction Federation).

Civil engineering companies’ profit margin has been around 2 per cent over the same 5-year period (Swedish Construction Federation). It is significantly more profitable to build housing than infrastructure, but it is also often associated with greater risk.

5.3 Outlook and price trend for construction investments in Sweden

The outlook for total construction investments (housing, premises and installations) greatly influences the price trend for civil engineering investments, since total construction investments constitute such a large part of the Swedish construction market.

Total construction investments increased sharply in 2016 and 2017, but this growth is expected to slow considerably in 2019. Civil engineering investments showed good growth in 2016, but were negative in 2017. Growth is expected to return in 2018 and 2019. Figure 6 shows growth forecasts for total construction investments and civil engineering investments.

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018F</th>
<th>2019F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total construction</td>
<td>+9</td>
<td>+9</td>
<td>+2</td>
<td>-3</td>
</tr>
<tr>
<td>investments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil engineering</td>
<td>+6</td>
<td>-1</td>
<td>+4</td>
<td>+4</td>
</tr>
<tr>
<td>investments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 6. The Swedish Construction Federation’s forecasts assess which projects will be initiated and then divide each project’s value by the number of years it is set to go on for. Thus a SEK billion project set to take 5 years yields SEK 2 billion per year.

5.3.1 Investment index Roads and Railways

*Outlook and price trend in 2015:* There was strong growth in the turnover of total construction investments in 2015 (see Figure 6), but the price trend was flatter. The investment index for Railways rose by 1.7 per cent while the investment index for Roads dropped by 3 per cent; the latter due to a great extent to a sharp decline in the price of oil (oil and bitumen in road asphalt represent a significant proportion of the road cost).

*Outlook and price trend in 2016:* The rate of increase in turnover of total construction investments remained high in 2016, with the construction and civil engineering market in a period of strong cyclical growth. This explains why the investment index for Roads rose by 3.8 per cent and the investment index for Railways by 4.2 per cent in 2016 (see Figure 7).
Outlook and price trend in 2017 and 2018: Total construction investments in Sweden have been increasing sharply since 2014, but are forecast to plateau at a high level in 2018. Competition in the Swedish Transport Administration’s railway procurements has been healthy in 2017, despite the strong growth phase in construction. Road procurements had an average of 3.4 tenders, and the average for railway procurements was the same, 3.4. The investment index for Roads rose by 3.5 per cent in 2017, and the investment index for Railways by 3.1 per cent, which adds up to a somewhat lower increase than in 2016.

Figure 7. The upper curve shows the Railway Index (contains a standard index for type project railway/weighted index based on the Contract Index/E84). The lower curve shows the total index for road investments based on the Contract Index/E84. The indexes provide some indication of the price trend of road and railway investments.
6. The Swedish Transport Administration’s supplier market, competition and price trends
6.1 Overall sector structure
- civil engineering contracts market

Skanska, NCC, Peab, Svevia and Infranord dominate the civil engineering sector with respect to road and embankment investments, operations, tunnels and resurfacing. Historically, these companies have sought to increase their control of the entire production chain in order to improve profitability. In strategic terms this means that they collaborate with suppliers and invest in their own production of important raw materials. Indeed, several of the companies own asphalt plants, concrete plants, and quarries. The cumulative effect of this is to restrict competition.

A number of large foreign suppliers are posing a challenge to the Swedish companies. See the heading 7.2.5 Foreign companies for examples.

Below are descriptions of some trends in the civil engineering contracts market and the consequences they are expected to have.

<table>
<thead>
<tr>
<th>Trends - civil engineering contracts</th>
<th>Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internationalisation, alliances, joint ventures and takeovers</td>
<td>An international market in large projects</td>
</tr>
<tr>
<td>Cash flow prioritised over profit</td>
<td>Lower tender prices, significant alteration and extension works, and a low rate of innovation</td>
</tr>
</tbody>
</table>

Figure 8. Trends – civil engineering contracts.

Procurements by the Swedish Transport Administration for the Roads and Railways transport modes are described on the following pages. The focus here is on highlighting deviations and submarkets where competition is less effective.

The Swedish Transport Administration’s overall measures to create more effective markets are described in Chapter 7 The Swedish Transport Administration and the construction market – looking ahead.
6.2 Roads – market, competition and price trend

Peab achieved a good profit margin in 2017. Skanska, NCC and Svevia were slightly less profitable than Peab in 2017. Several of the companies posted project write-downs in their annual reports, negatively affecting profitability. This may mean that the companies will become more restrictive as regards making tenders. Annexes 1 and 4 contain more detailed information about the Roads transport mode.

The competition situation, with regard to the average number of tenderers, has remained relatively constant over the past three years – see the charts to the left. The number of procurements in Roads by the Swedish Transport Administration is shown below.

<table>
<thead>
<tr>
<th>Number of procurements, Roads</th>
<th>år 2014</th>
<th>år 2015</th>
<th>år 2016</th>
<th>år 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investments</td>
<td>128</td>
<td>125</td>
<td>109</td>
<td>85</td>
</tr>
<tr>
<td>Maintenance, basic contracts</td>
<td>13</td>
<td>16</td>
<td>23</td>
<td>28</td>
</tr>
<tr>
<td>Maintenance, other</td>
<td>135</td>
<td>95</td>
<td>93</td>
<td>86</td>
</tr>
<tr>
<td>Summa</td>
<td>276</td>
<td>236</td>
<td>225</td>
<td>199</td>
</tr>
</tbody>
</table>

Figure 11. Number of procurements, Roads.

6.2.1 Investments

NCC, Peab and Svevia are dominant in road investments. Implenia and SBT Sverige are two foreign companies that have increased their market share considerably over the past three years. More detailed descriptions can be found in Annex 4, which also applies for the headings below.

6.2.2 Maintenance on basic contracts, Roads

Svevia has the biggest market share by far of basic contracts in Roads (i.e. contracts for road maintenance in a specific geographical area). NCC, Peab and Skanska are consistent challengers. The price level is historically low, as is the rate of innovation.

In consultation with the sector, the Swedish Transport Administration is carrying out a review of business forms, with clearly defined requirements focusing on a higher degree of collaboration, better status descriptions, more precise quantity specifications as a basis for adjustments, acceptance inspections, and increased scope for innovation.

6.2.3 Other maintenance, Roads

Other maintenance within Roads is maintenance executed outside of the framework of a basic contract. Svevia dominates in this area, followed closely by Skanska, NCC and Peab.

6.3 Railways – market, competition and price trend

Infranord reduced its market share between 2012 and 2017, and this was also the case for Skanska and Peab. In the same period, an historic number of smaller suppliers increased their market share. Strukton increased its volume of contracts by about 75 per cent between 2012 and 2017 (this increase includes Strukton’s acquisition of BB Rail). VR Track increased its volume by 30 per cent. NRC Group entered the Swedish market around two years
ago and acquired Svensk Järnvägsteknik and Segerno Entreprenad, Elektrobyggnad and Litz Entreprenad, which are now part of the NRC Group. In 2017 the group also acquired Signal och Banbyggarna i Dalarna, but they only became part of NRC Group in 2018. By means of a number of acquisitions as well as organic growth, NRC is challenging the market’s established suppliers, and today it has a volume of contracts of approximately SEK 900 million. More detailed information about the Railways transport mode can be found in Annexes 1 and 5.

Peab achieved a good profit margin in 2017. Infranord, Skanska and NCC had slightly lower profit margins than Peab. Several of the companies posted project write-downs in their annual reports, negatively affecting profitability. This may mean that the companies will become more restrictive as regards making tenders.

Competition decreased significantly in 2016. In 2017 the number of tenderers returned to the levels of 2014 and 2015, see Figures 12 and 13. The number of procurements in Railways by the Swedish Transport Administration is shown below.

### Number of procurements, Railways

<table>
<thead>
<tr>
<th>Number of procurements, Railways</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investments excl. BEST</td>
<td>51</td>
<td>39</td>
<td>21</td>
<td>29</td>
</tr>
<tr>
<td>Investments, BEST</td>
<td>68</td>
<td>38</td>
<td>42</td>
<td>39</td>
</tr>
<tr>
<td>Maintenance, basic contracts</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Maintenance, other</td>
<td>28</td>
<td>22</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>151</td>
<td>107</td>
<td>79</td>
<td>100</td>
</tr>
</tbody>
</table>

Figure 14. Number of procurements, Railways.

### 6.3.1 Investments excluding track, power, signal and telecom (BEST)

NCC, Peab and Skanska are the dominant actors. NRC Group is a challenger. More detailed descriptions can be found in Annex 4, which also applies for the headings below.

### 6.3.2 Investments in track, power, signal and telecom (BEST)

Skanska, NCC, Bombardier, NRC Group and Infranord are significant actors. Challengers include Eltel and BDX. More information about suppliers of technically approved material can be found in Annex 7a.

### 6.3.3 Maintenance in basic contracts, Railways

Basic contracts in Railways are railway maintenance contracts within a specific geographical area.

Following the introduction of competitive tendering, Infranord AB’s market share of this maintenance category has steadily decreased, but it remains the most dominant company by far, with a market share of 45 per cent. Strukton Rail AB has about 30 per cent market share, followed by VR Track Sweden AB and Infratek Sverige AB. Infranord and Strukton Rail represent about 80 per cent of the purchasing volume.

The railways basic contracts category is experiencing certain problems with a low price level and a continued low rate of innovation. The policy
debate about whether or not to continue competitive tendering for railway maintenance has increased uncertainty for the actors in the supplier market.

In order to improve market conditions, the Swedish Transport Administration continues to work with supplier market activities such as information meetings with interested new suppliers. The Transport Administration is also developing collaboration models, reviewing templates for tender documents, and continuing to implement service windows and incentive models.

6.3.4 Other maintenance, Railways

Other maintenance in the Railways transport mode comprises maintenance not carried out within the framework of basic contracts, and instead purchased via separate procurements. This market is dominated by Infranord, NRC Group, Leonhard Weiss, and Implenia among others. The broad scope of this category means that the number of companies that have contracts with the Swedish Transport Administration is increased.

6.4 Overall sector structure – engineering consultants

The Swedish market for engineering consultants in infrastructure is dominated by major actors such as Sweco, ÅF, WSP, Tyréns, Ramboll and Cowi. There is also a large number of small consultancies in the market, while the number of medium-sized companies is small.

The large companies are continuing to acquire smaller ones, and takeovers of foreign companies are becoming more common.

A growing trend is for the use of intermediaries, often referred to as consultancy brokers, in various forms. In January 2017 the Swedish Competition Authority and the National Agency for Public Procurement presented a report entitled Intermediaries in Public Procurement, to try to clarify how solutions involving intermediaries should be applied in public procurement. Once the rules have become clear it is likely that the use of intermediaries will increase in several areas.

The consultancy market in infrastructure is international, and a number of foreign consultancy firms are showing an interest in Sweden and in the Nordic infrastructure market generally. This applies to project design consultants as well as to project management firms.

Below is a description of some of the trends and the consequences they are expected to generate.

<table>
<thead>
<tr>
<th>Trends – engineering consultants</th>
<th>Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internationalisation</td>
<td>Fewer actors, but international competition.</td>
</tr>
<tr>
<td>• consolidation through takeovers</td>
<td></td>
</tr>
<tr>
<td>• collaboration between Swedish and foreign consultants</td>
<td></td>
</tr>
<tr>
<td>Many contracts and a high level of resource use, particularly in metropolitan areas.</td>
<td>Resource and expertise shortages in consultancies as well. New ways of finding talent will be tried when not enough new engineers are being trained.</td>
</tr>
<tr>
<td>A positive profitability trend in the consultancy sector.</td>
<td>Prices of consultancy services are rising, and the firms are becoming more businesslike. Reported variation orders (substitutions, additions and omissions) are increasing. The need for acceptance inspections is growing, and there are more contract issues to handle and adjust during the execution phase.</td>
</tr>
<tr>
<td>The complexity of consultancy deliveries.</td>
<td>Consultancy firms will add new areas of expertise.</td>
</tr>
</tbody>
</table>

Figure 15. Trends in engineering consultancy.
6.5 Engineering consultants – market, competition and price trend

Sweco, ÅF, WSP and Tyréns dominate the engineering consultancy market, closely followed by Cowi and Ramboll. In recent years ÅF, WSP, Tyréns and Cowi have increased their market share and they are currently challenging Sweco, which was previously the biggest actor by far. As a result, the market today is more balanced.

More and more consultancy services are also being delivered by contractors. Design-build contracts have embedded consultancy costs. Peab and NCC are the biggest suppliers of consultancy services among the contractors. See Annex 6 for more detailed information.

Engineering consultants – Roads

ÅF, Sweco, WSP and Tyréns dominate. Smaller actors, in volume terms, include Ramböll, Norkonsult and Cowi. More detailed information can be found in Annex 6, which also applies for the headings below.

Engineering consultants – Railways

Sweco and ÅF dominate. Smaller actors, in volume terms, include Cowi, WSP and Tyréns.

Figure 17 on the right shows how the degree of concentration is increasing sharply and the number of tenderers is decreasing. The number of companies that together represent 80 per cent of the purchasing volume has also decreased (Figure 16). This is due to ongoing globalisation (with a large number of acquisitions), the Swedish Transport Administration’s intentional packaging of projects, and the fact that the construction outlook is strong, with many contracts to choose from. The Transport Administration also uses framework agreements to a greater extent than before. The Swedish Transport Administration is working to increase predictability and uniformity across the country. The Transport Administration is also faced with the challenge of attracting more foreign consultants to the Swedish market in order to maintain competition. The numbers of procurements made by the Transport Administration over the past four years are shown below.

<table>
<thead>
<tr>
<th>Number of procurements, engineering services and consultants</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering services and consultants, Roads</td>
<td>160</td>
<td>107</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>Engineering services and consultants, Railways</td>
<td>147</td>
<td>126</td>
<td>99</td>
<td>156</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>307</strong></td>
<td><strong>233</strong></td>
<td><strong>167</strong></td>
<td><strong>224</strong></td>
</tr>
</tbody>
</table>

Figure 18. Number of procurements, engineering services and consultants.
6.6 Technically approved material - competition and price trend

Present state of competition
The market for technically approved material is characterised by healthy competition between many Swedish and foreign suppliers. The exception is spare parts for previously installed systems, where the Swedish Transport Administration is limited by a monopolistic situation.

In the major procurements, which represent about 80 per cent of the purchasing volume of technically approved material, an average of 4.8 tenders are submitted. In the smaller procurements, which represent a large proportion of technically approved material items, competition is more limited, with an average of about 2.6 tenders per procurement. More detailed information about this can be found in Annex 7a.

Cost trend in 2017
The raw materials that most influence the cost level for technically approved material are iron ore (which mainly affects the price of track material) and copper (which mainly affects electrical power material).

The price trend for the Swedish Transport Administration’s biggest areas in technically approved material (track material) varied in 2017. The price level of switches and rails has risen by about 9 per cent due to price changes in the raw material. For sleepers the price level has dropped by just under 15 per cent because the Transport Administration introduced a new type of lighter-weight concrete sleeper for a 25-ton axle load as well as a new pre-installed mounting system.

The chart below shows the cost trend since 2006 of the Swedish Transport Administration’s material for track, power, signal and telecom on a typical 10-kilometre stretch of railway (the material price index) compared to the market price trend as tracked by Statistics Sweden (shadow index).

We can see that the material is currently about 13 per cent more expensive than it was twelve years ago. Just under a third of this increase is due to the fact that a more robust system of overhead contact lines and also stronger concrete sleepers were introduced during the period. The lag in the material price index versus the market (shadow index) is due to the existence of several material agreements that lack raw material clauses.
6.7 IT – market, competition and price trend
IT is used throughout the Swedish Transport Administration’s operations. There are IT solutions for everything from office workplace support to tools for supporting and controlling installations and traffic. Information and IT play a crucial role for the quality and accessibility of most of the services and functions that the Transport Administration needs internally and provides externally. Well-functioning IT is a fundamental requirement for a successful government agency.

IT needs continue to grow, partly because IT is becoming increasingly critical for operations. This leads to a greater need for resources as well as comprehensive undertakings, which in turn will influence requirements made of the market.

The proportion of IT purchases made through the Transport Administration’s framework agreements and central government framework agreements continues to grow. More details on this can be found in Annex 7b.

6.8 Electricity – market, competition and price trend
Every year the Swedish Transport Administration purchases about 2.7 TWh of electricity, for its own needs as well as those of the entire railway sector. However, not all of this electricity is paid for by the Transport Administration - 83 per cent of its cost is passed on to external customers (most of them railway companies). In 2017 the electricity cost, including network costs, came to approximately SEK 1 152 million.

All electricity is purchased via the Nordic electricity exchanges Nordpool Spot (for physical supply) and Nasdaq Commodities (for financial price hedges).

Trading on an exchange maximises competition since all the actors in the market can participate. Trading is done with the aid of external asset management firms. This is the less expensive option for the Swedish Transport Administration, as trading on an exchange requires daily management.

The price trend in the electricity market has been favourable over the past year, which makes current prices relatively low. The Swedish price has returned to a lower level, and has tracked the Nordic system price quite closely over the year. In an average year (in terms of water supply and temperature) the Nordic market generates a market surplus, keeping prices at a relatively low level.

Under the Swedish Transport Administration’s category strategy for electricity we have to guarantee prices for up to 5 years in advance, at a rate of about 20 per cent per year, so that we are 90 per cent guaranteed when we begin a new year. We have monthly meetings with our category team, made up of the Swedish Transport Administration’s electricity group in Purchasing and Logistics and the railway companies that have chosen to participate – currently SJ AB, Green Cargo, Hector Rail, LKAB and Arriva.

The goal of our electricity trading is to avoid ever exceeding the price budgeted for by the category team. The price budgeted for 2018 is 30.3 öre/kWh (the price budgeted for 2017 was 34.8 öre/kWh).
7. The Swedish Transport Administration and the construction market - looking ahead
7.1 The construction outlook and the Swedish Transport Administration’s future purchasing volume

7.1.1 Measures planned by the Transport Administration 2018–2029

In the first half of 2018 the government is to set out a new national plan for transport infrastructure for the period from 2018 to 2029. The plan has a value of SEK 622.5 billion (at 2017 prices), of which SEK 570 billion is for investments, operations and maintenance. To the SEK 622.5 in the plan will be added around SEK 90 billion from track access charges, congestion taxes, infrastructure charges, loans and co-financing. Other upcoming projects and investigations include the final report of the National Negotiation on Housing and Infrastructure, and a decision on the proposed refurbishment of the Inland Line.

The Transport Administration’s current annual purchasing volume is around SEK 40 billion, of which investments and maintenance (of roads and railways) represent about SEK 35 billion. The national plan will involve increasing the allocation for investments and maintenance to SEK 43 billion per year, on average, for the period from 2018 to 2029 (at fixed prices).

The coming years will be characterised by sharp volume increases, primarily in investment and maintenance. The investment increases are mainly for specified road and railway projects in the national plan, and the increases in maintenance mainly for railway maintenance and reinvestments.

The Swedish Transport Administration’s sharp increases in spending on investment and maintenance over the coming years call for greatly improved long-term planning. Demand for recruitment and skills development will also be stepped up by the Transport Administration and in affected industries.

Sweden’s overall construction outlook is already strained, and there are sizeable shortages of workers with the right skills. Read more about this in the next section.

Figure 20. The Swedish Transport Administration’s planned measures 2018–2029. Costs of planned measures do not include internal costs or contributions, and the volume of consultants has been added to the production cost in the coming years, as the distribution of the total volume of consultants cannot be estimated at this stage.

Road investments are set to increase at the beginning of the planning period due to an increased production volume in the Stockholm Bypass project, as well as other such projects. From 2020 the volume will begin to decrease, as...
more stages are completed in major ongoing projects such as the West Sweden Package and the Stockholm Bypass. In subsequent years investment volumes will fall as congestion taxes will largely be used to amortise loans for earlier metropolitan investments.

Railway investments will grow steadily until 2021, and then plateau at a higher level. These volume increases are linked to major prioritised projects included in the proposed national plan, such as the West Link. The increase from the current level will be approximately 43 per cent (at fixed prices).

Railway maintenance will gradually increase to higher levels in order to achieve a more robust rail network. The volume increase here will be 47 per cent from the current level.

7.1.2 The Swedish construction outlook
Total construction investment has increased sharply over the last few years, and increased by 9 per cent in 2017. The expansion in the Swedish economy will slow next year due to reduced construction investments. Total construction investments are forecast to increase by 2 per cent in 2018 and then decrease by 3 per cent in 2019. Total infrastructure investments (private and public) dropped by 1 per cent in 2017, but are instead forecast to increase by 4 per cent in 2018 and 2019.

However, the Swedish Transport Administration and other large clients have several major projects in the pipeline over the next few years, principally in metropolitan areas. Construction investments are forecast to be considerable in the West Region and Stockholm/East Region, where several major Transport Administration projects and an expansion of the metro system are ongoing.

The construction industry has become increasingly advanced and is already facing difficulties with skills provision. An additional factor is that around 50,000 people in the industry will be retiring over the next five years. The short term solution to the skills shortage is to use more foreign labour. The skills shortage is described as one of the main obstacles to increased construction in all the Nordic countries. The number of posted foreign workers in Sweden increased by 12 per cent in 2017. The Swedish Work Environment Authority states that there were 47,727 such workers in the country in 2017, and that 49 per cent of them were working in the construction sector. Posted workers are employees who have been sent by their employer to work in another country for a limited period of time. By way of comparison, the Swedish Transport Administration has estimated that the expansion of infrastructure alone could create in the region of 235,000 person-years during the period from 2018 to 2029.
In the past five years, total construction investments have increased by about 40 per cent and infrastructure investments have increased by about 16 per cent.
The Swedish Transport Administration entered into a number of major contracts during the second half of 2017, see examples below.

- The Korsvägen contract in the West Link was awarded to a consortium made up of NCC Sverige and Wayss and Freytag of Germany (contract value SEK 3.2 billion)
- The Haga contract in the West Link was awarded to a consortium made up of Gülermak (Turkey), Astaldi (Italy) and Norwegian-owned Segermo (contract value SEK 2.3 billion)
- The Getingmidjan project was awarded to Implenia Construction (contract value SEK 1 billion)
- Construction of the E22 motorway in Skåne, between Sätaröd and Vå, was awarded to Peab (contract value SEK 629 million)
- Construction of the motorway between Alingsås and Vårgårda was awarded to Peab (contract value SEK 539 million)

The Swedish Transport Administration and other large clients have several major projects in the pipeline over the next few years, principally in metropolitan areas. Cumulatively, this could lead to:

- fewer tenders and higher prices
- quality deficiencies
- health and safety issues
- resource and skills shortages.

The Transport Administration is working to prevent these outcomes. The next chapter describes how.

7.2 The Swedish Transport Administration’s efforts to increase productivity, innovation, competition and public benefit

The Swedish Transport Administration’s goal is to create conditions for increased productivity, innovation, competition and public benefit, thus continually creating more value for money. This is formulated in the Swedish Transport Administration’s comprehensive client strategy. This section describes in general terms what is being done within the Transport Administration to achieve this goal.

7.2.1 Procurement and project execution

Comprehensive client strategy

For a number of years, the Swedish Transport Administration has been moving towards becoming exclusively a client, with the aim of creating more value for money through increased productivity, innovation and competition.

When a contract gives some scope for freedom in execution to the supplier, procuring it as a design-build contract with operational requirements is a success factor. By specifying requirements for the way the delivery takes place rather than for its exact execution, the client gives the supplier the freedom to be innovative and to choose resources, materials and methods
– as long as the operational requirements are fulfilled. The use of fixed fees (where conditions permit) in project planning is another way to create incentives for increased productivity and innovation. An alternative is to apply a fixed fee for part of the project and a time-and-materials fee for the rest, based on what might be predicted.

The Swedish Transport Administration strives to lower barriers to entry for both Swedish and foreign suppliers, to increase competition. The Transport Administration also wants to create conditions for long-term sustainability in procurements, a higher degree of standardisation in order to increase productivity, more thinking in terms of life cycles, and constant improvements to operations based on cross-border learning.

**The Swedish Transport Administration’s business strategy simplifies matters by classifying contracts and projects by type**

The Swedish Transport Administration classes consultancy and contract procurements as type contracts or type projects. This classification is based on an assessment of complexity and uncertainty, and of the scope for freedom that the supplier can be given in terms of execution.

Each type contract or type project has a specified overall strategy. Simple projects with a sufficient scope for freedom, for example, would use the Swedish Transport Administration’s Basic Collaboration model – a design-build contract with a fixed fee. Complex projects with a very high level of uncertainty might use the Swedish Transport Administration’s High Collaboration model, with time-and-materials fees, financial incentives and basic cost application.

**Contract form**

The conditions for the project determine the choice of contract form. The Swedish Transport Administration’s focus is on choosing the contract form based on an assessment of the complexity of the project, what the level of uncertainty is, and what degree of freedom can be given to the supplier.

When the scope for freedom is sufficient, a design-build contract can be chosen (where conditions for it are present) in which a greater degree of freedom for the supplier and less control of the details by Trafikverket can be achieved. This is in order to improve the supplier’s opportunities for profitability in developing methods and products.

**Collaboration form**

The Swedish Transport Administration’s Basic Collaboration model creates conditions for productivity and innovation by formulating common goals with the contracted supplier, joint risk management, and methods for conflict resolution. In projects that have high levels of uncertainty and complexity, where time-and-materials fees, financial incentives and basic cost setting is used, the Swedish Transport Administration’s High Collaboration contract model is a prerequisite for success.

**Remuneration form**

Contract and collaboration forms help create conditions for increased productivity. But above all it is the form of remuneration, with various supplementary incentives (such as the possibility of a bonus), that drives suppliers to achieve increased productivity and innovation.
Procurements and business that promote development

Business that promotes development refers to procurements where new solutions are not excluded, and where the Swedish Transport Administration instead promotes development by creating opportunities and incentives for suppliers to innovate. Such measures may include an early dialogue with the market, advanced requirements specifications, operational requirements, innovation bonuses, packaging, and adaptive contract duration and dialogue over the contract period.

The Swedish Transport Administration measures the proportion of procurements that can be regarded as promoting development. Read more about this in Annex 9a and 9b.

Risk management

The Swedish Transport Administration's approach is to apply reasonable risk sharing between client and supplier by having each identified risk borne by whichever party is best prepared to manage and reduce it.

7.2.2 The Swedish Transport Administration's packaging of procurements

Foreign suppliers have historically shown interest in major concrete works such as bridges and tunnels. These companies typically show an interest in contracts of between SEK 150 and 700 million, but have in recent years also been interested in considerably smaller projects, as a way of learning about the market at a limited level of risk exposure. The biggest foreign suppliers show an interest in works worth SEK 1 billion and above in a single contract.

Packaging for serial production is done by combining individual objects when this provides potential for serial production and economies of scale. The competition situation is then considered in relation to these advantages. Packaging is also done in the form of framework agreements for land contracts of up to SEK 10 million. Current framework agreements and forthcoming framework agreement procurements provide opportunities for smaller companies.

7.2.3 Opportunities for small and medium-sized companies

In order to guarantee the existence of a dynamic market, where small and medium-sized companies can grow and operate as subcontractors or, where relevant, as main contractors, the Swedish Transport Administration works actively to promote opportunities for small and medium-sized companies. Over the last few years the Transport Administration has entered into a number of construction contracts for major projects, which affects the proportion of small and medium-sized companies. The proportion of small and medium-sized suppliers has evolved in the following way (details in Annex 3b):

- Measured in terms of SEK contract values, the share has decreased; in 2017 it was 14 per cent (in 2015 it was 18 per cent).
- Measured in terms of the number of contracts entered into, the share has decreased; in 2017 it was 39 per cent (in 2015 it was 44 per cent).

The Swedish Transport Administration has strategies for lowering the barriers to entry for small and medium-sized companies in selected areas, such as in land contracts. The Transport Administration has carried out a series of pilot procurements in these areas, with simplified tender documents, in order to attract small and medium-sized companies. The conclusion is that training and information are often needed in order for smaller suppliers to want to submit tenders.
The Association of Swedish Earth Moving Contractors and the Swedish Transport Administration have created a training course about the Transport Administration's tender documents. The course was run in 2017. Procurement of a new framework agreement will take place in 2018, and more training opportunities are planned in preparation for it. The purpose is to get more small and medium-sized companies to submit tenders.

The Swedish Transport Administration also provides material for railway projects, and enters into special framework agreements in construction intended to give smaller companies an opportunity to learn about the market.

### 7.2.4 Opportunities for foreign companies

The Swedish Transport Administration strives to attract foreign companies that want to establish themselves in Sweden. Foreign companies need to be hired if planned projects are going to be executed at the rate decided by the government. This also creates opportunities for experience exchange between countries, which in turn can increase the rate of innovation in the sector. The proportion of contracts awarded to foreign suppliers is about the same as in 2016. We can see a slight increase in contractors and a slight decrease in consultants. More detailed information is available in Annex 3a. One important aspect to bear in mind when looking at the statistics is that foreign companies have started submitting tenders in consortiums together with Swedish companies. The Swedish Transport Administration thus brings more foreign suppliers into the market even if these do not always show up in official statistics.

Efforts to get more foreign tenderers and for cooperation between foreign and Swedish companies are ongoing. In November a Nordic Suppliers Day was held for 722 guests, of which a third were foreign. It included the opportunity for short meetings between international suppliers and staff engaged on Swedish Transport Administration projects. Newsletters were sent to those expressing interest, and individual meetings have been held with foreign suppliers.

To improve the prospects of getting international suppliers into the market, the Swedish Transport Administration will continue to carry out the following activities:

- organise a big suppliers' day (the next one will be in April 2019)
- pay visits to embassies and companies
- organise a meeting where suppliers can ask questions based on an example tender document
- improve foresight in planning purchases
- translate a summary of the procurement in order to facilitate participation by foreign suppliers
- provide an English-language version of the procurement plan
- change the requirement specification for references (so that it also allows for foreign references)
- lower the number of competition-reducing requirements
- carry out targeted marketing activities around Europe ahead of procurements for major Swedish Transport Administration projects.
7.2.5 Foreign companies

A selection of the foreign suppliers present in the Swedish market:

- Implenia Construction (Germany/Switzerland)
- NRC Group (Norway)
- Veidekke (Norway)
- SBT Sverige
- Lemminkäinen (Finland)
- STRABAG AB (Austria)
- CMC/Vianini (Italy)
- Idom (Spain)
- Systra (France)
- Infratek (Norway)
- OHL (Spain)
- Wayss & Freytag Ingenieurbau AG (Germany).

Other international companies have also shown interest in our projects, including:

- the Italian infrastructure contractors Salini Impregilo, Astaldi, Società Italiana per Condotte d’Acqua S.p.A. and Itinera S.p.A
- Arup, an Irish consultancy firm
- CH2M, a British consultancy firm
- the French companies Engie, Bouygues, Colas Rail and Eiffage
- the Spanish companies Dragados, Ferrovial Agroman and COPASA
- Jacobs from the US, and others.

Several of the biggest actors in the construction market are European, but Asian and American contractors have greatly increased their investments in Europe recently. Big international contractors are adapting to business models and locations – working in consortiums or other forms of alliance and setting up subsidiaries in those countries they are focusing on. It is primarily Spanish, Italian, French and German suppliers that are showing an interest in the Swedish market. British suppliers have not shown the same level of interest. In order to maximise competition in the market, the Swedish Transport Administration needs to have regular feedback from it, advertise contracts over a certain size, summarise tender documents in English, and learn lessons from other organisations that have experience of using international suppliers.

7.2.6 Continual development of suppliers

The Swedish Transport Administration carries out supplier follow-ups and development, and works resolutely on attracting new suppliers, both Swedish and foreign. The aim of supplier development is help achieve the Transport Administration's client strategy – i.e. increase international competition through more tenders and create stable conditions for equal treatment, in consultation and collaboration with the market. A further aim
is to improve learning methods, with the Transport Administration tending towards sustainable and innovative (development-promoting) suppliers. The goals of all this are higher productivity, better-quality deliveries, and happier suppliers.

In order for the Swedish Transport Administration as a professional client organisation to achieve these goals, each category team is engaged in ongoing efforts to do so. Each one catalogues all existing and potential suppliers. Continual improvement at the national level is done in supplier teams. Improvement measures are based on aggregated follow-ups (e.g., using the Upplev follow-up tool for following up societal, environmental and other requirements). This feedback helps develop both the supplier and the Transport Administration, and by extension the entire industry. Annex 8 has more information about supply follow-ups.

7.2.7 Competition on equal terms and long-term sustainability

The Swedish Transport Administration applies systematic governance and follow-up of societal requirements (taxes, minimum wages, zero tolerance of child labour, a good work environment etc), reduction of negative environmental and health and safety effects, and employment promotion measures to provide opportunities for people far removed from the labour market.

The Transport Administration has introduced special initiatives for the monitoring of suppliers’ fulfilment of societal requirements, including in the form of audits. The purpose is to ensure that the Transport Administration’s suppliers do not create competitive advantages for themselves by not living up to the societal requirements that the Transport Administration sets in its procurements. The Transport Administration focuses on sustainability, also regarding it as a way to create equal terms on which to compete. Audits of societal requirements were carried out on 28 selected contracts in 2017. These audits will continue in 2018. Read more about societal and environmental requirements in Annexes 10 and 11.

7.2.8 Governance and monitoring

The Swedish Transport Administration’s governance and monitoring of contracts has increased, by means of more stringent requirements and follow-ups of the client’s and suppliers’ own monitoring programmes and plans. In a strong market, where quality as well as health and safety conditions are at risk of deteriorating, governance and monitoring become even more important than before.

7.2.9 Purchase planning and communication

Six-year implementation plan: The implementation plan presents measures for maintenance and development of the transport system over the coming six years. The plan is based on the measures included in current long-term plans, county plans and the national plan for the transport system. One of the uses of the implementation plan is as a planning tool for companies and organisations.

The Swedish Transport Administration’s implementation plan is available at Trafikverket.se/för dig i branschen/Planera och utreda/Planer och beslutsunderlag/Nationell planering/Genomförandeplan.
Purchasing schedule

Every month a purchasing schedule is published on trafikverket.se that specifies planned procurements for the coming period. The purchasing schedule is also translated into English.

In the Swedish construction market the following things will be particularly important for the Swedish Transport Administration:

- planning purchases
- foresight in purchasing schedules
- packaging at an early stage of purchase planning
- distribution of projects over time based on the market situation
- coordination of projects external to the Transport Administration in respect of tendering dates
- international marketing of projects
- lowered barriers to entry for foreign companies and small and medium-sized companies
- governance and monitoring of deliveries (quality, health and safety)
- sector collaboration.
8. Analysis and conclusions
The Swedish Transport Administration procures investment and maintenance measures worth approximately SEK 35 billion per year, which makes up about 30 per cent of the total civil engineering market. In other words the Transport Administration is a very big client, which means that its strategies have considerable significance for the sector. The Transport Administration therefore also has a great responsibility for the development of the sector. This section describes the degree to which the Transport Administration has functioning submarkets and what it does to create the conditions for more effective markets.

The profitability of construction and civil engineering companies

The profit margin of engineering consultancy firms (net profit/loss for the year divided by net turnover) has been between 5.5 to 7.5 per cent over the past 5 years, according to statistics from the Swedish Federation of Consulting Engineers and Architects.

According to the Swedish Construction Federation, construction contractors’ profit margin has been between 8 and 10 per cent over the same period. Civil engineering companies’ profit margin has been around 2 per cent over the same 5-year period. In other words it is significantly more profitable to build housing than infrastructure, but it is also often associated with greater risk.

Civil engineering market and contracts – foreign companies continue to show interest in Sweden

The Swedish Transport Administration has potential suppliers in the world and European markets and is making several targeted efforts to lower barriers to entry and attract foreign suppliers.

These efforts include visits by the Transport Administration to embassies and companies, organising international supplier days, packaging large projects, translating executive summaries into English, and reducing the number of competition-restricting requirements. In recent years this has led to an increased proportion of foreign companies in procurements.

In order to maximise competition in the market, the Transport Administration needs to further develop regular contacts with European companies, summarise tender documents in English, and learn lessons from other organisations that have experience of using international suppliers.

Civil engineering market and contracts – small and medium-sized companies

The Swedish Transport Administration also simplifies the tendering procedure for small and medium-sized companies, where the challenge is largely an information issue.

The Transport Administration has many smaller projects suitable for small and medium-sized companies, and it has special framework agreements for land contracts that are intended to allow smaller companies to learn the market.
Civil engineering market and engineering consultants – companies are decreasing in number due to takeovers

There is an international trend for larger companies to take over smaller ones. Engineering consultants tend to have an ambition to grow ever bigger in response to increased globalisation. Swedish companies are growing through takeovers, and are making inroads into new areas of competence as well as broadening their scope by moving out into the world in other ways.

International actors, in turn, are making their way to Sweden. The trend is for an increasingly globalised market. Indeed, this takeover trend is beginning to show up in the Swedish Transport Administration’s procurements, with the average number of tenders decreasing to around 2.8 in 2017 from about 4 in 2014. In this respect, the Transport Administration faces a challenge to try to attract more foreign consultants to the Swedish market in order to maintain competition.

Competition is generally healthy in the market for technically approved material

The market for technically approved material is characterised by healthy competition between Swedish and foreign suppliers. The exception is in spare parts for previously installed systems, where the Swedish Transport Administration is limited by a monopolistic situation. In the larger procurements, which represent about 80 per cent of the purchasing volume, the Transport Administration receives an average of 4.8 tenders. Competition is healthy overall.

The Swedish Transport Administration purchases electricity via the Nordic electricity exchanges for maximum competition

Every year the Swedish Transport Administration purchases about 2.7 TWh of electricity, for its own needs as well as those of the entire railway sector, of which 83 per cent is debited to external customers (most of them railway companies).

The Transport Administration’s electricity trading is efficient. All electricity is purchased via the Nordic electricity exchanges Nordpool Spot (for physical supply) and Nasdaq Commodities (for financial price hedges). Trading on an exchange maximises competition as all the actors in the market can participate.

IT services are purchased primarily through framework agreements

The Swedish Transport Administration has purchased intermediary solutions (often referred to as consultancy brokers) in several cases, and uses framework agreements and central government framework agreements to a great extent. Growing IT needs mean that more resources as well as more comprehensive commitments are required. Overall, this has led to a reduction in the average number of tenders to 2.2 (in 2014 it was 2.4), and to a reduction in the number of companies that together represent 80 per cent of the purchasing volume to 27 (in 2014 it was 49). The need for comprehensive commitments from suppliers to improve efficiency means that the number of suppliers decreases, which is in line with the Transport Administration’s strategy.
Total construction investments are expected to be high in metropolitan areas
The Swedish Transport Administration and other major clients have several large projects in the pipeline over the next few years, mainly in metropolitan areas. The Swedish Construction Federation’s assessment is that total construction investments (housing, premises and infrastructure) will be high in the Stockholm/East Region and the West Region over the coming years. This may lead to fewer tenders, higher prices, a lack of quality, health and safety shortcomings, and skills and resource shortages. The Transport Administration is currently implementing a series of measures intended to mitigate the effects of such consequences, see the next heading.

The Swedish Transport Administration’s efforts to increase productivity, innovation, competition and public benefit
The Swedish Transport Administration classifies consultancy and contract procurements as type contracts or type projects. This classification is based on an assessment of complexity and uncertainty, and of the scope for freedom in execution. Every type project or type contract has a specified overall strategy. This ensures efficiency when choosing the form of project or contract, remuneration, collaboration, bonus etc. Together with measures for promoting development, this creates conditions for increased productivity and innovation.

The Transport Administration’s focus is on selecting design-build contracts (where conditions for degrees of freedom are present) as contract form, and strives in these contracts for a considerable degree of freedom, with less control of details. This is in order to increase suppliers’ scope for profitability with respect to method and product development.
The Transport Administration conducts active follow-up and development of suppliers. Evaluations of suppliers’ deliveries create opportunities for improvements and may eventually become a basis for qualification of suppliers in procurements.

The Transport Administration packages contracts in the SEK 1 billion category into a single contract. This creates interest among big European suppliers, in turn creating competition. As a result, the proportion of foreign suppliers has grown in the last few years. Packaging for serial production is done by combining individual objects that together provide potential for serial production and economies of scale.

The Transport Administration also focuses on control and follow-up of societal requirements (taxes, minimum wage, child labour, health and safety, etc), minimisation of negative environmental and health and safety effects, and employment promotion measures to offer opportunities to people far removed from the labour market. Increased control and monitoring of contracts have also been introduced, through more stringent requirements and intensified follow-ups of clients’ and suppliers’ control programmes and control plans. In a strong market, where quality as well as health and safety are at risk of deteriorating, control and monitoring become even more important.

Every month a purchasing schedule is published on the Transport Administration’s website, trafikverket.se, that specifies planned procurements for the coming period. The purchasing schedule is also translated into English, and is important as a tool for showing the market what is happening in the near future as well as for internal planning at the Transport Administration.

In the Swedish construction market the following factors will be particularly important for the Swedish Transport Administration:

- planning purchases
- foresight in purchasing schedules
- packaging at an early stage of purchase planning
- distribution of projects over time based on the market situation
- coordination of projects external to the Transport Administration in respect of tendering dates
- international marketing of projects
- lowered barriers to entry for foreign companies and small and medium-sized companies
- control and monitoring of deliveries (quality, health and safety)
- sector collaboration.
ANNEXES

1A. Brief facts about the Swedish Transport Administration’s purchasing volume
1B. The Swedish Transport Administration’s biggest suppliers 2015–2017
2. The European economic outlook
3A. Proportion of foreign suppliers
3B. Proportion of small and medium-sized suppliers (SME)
4A. Investment in Roads, market shares
4B. Maintenance, basic contracts, Roads, market shares
4C. Other maintenance, Roads, market shares
5A. Investment, Railways excluding BEST works, market shares
5B. Investment, Railways BEST works, market shares
5C. Maintenance, basic contracts, Railways, market shares
5D. Other maintenance, Railways, market shares
6A. Engineering services and consultants, Roads, market shares
6B. Engineering services and consultants, Railways, market shares
7A. Suppliers of technically approved material
7B. IT market and key figures
8. Upplev – supplier follow-up and delivery assessment
9A. Development-promoting business – goals and measures at the Transport Administration level
9B. Development-promoting business – goals and measures at the Transport Administration level
10. Societal requirements in the Swedish Transport Administration’s procurements
11. Environmental and climate requirements in the Swedish Transport Administration’s procurements
• STA’s 10 biggest suppliers represent about 55 per cent of the total purchasing volume.

• STA’s 100 biggest suppliers represent about 85 per cent of the total purchasing volume.

• STA’s total number of suppliers is 9,755.

PURCHASING VOLUME 2017
SEK MILLION
40,113

Purchasing volume 2017, per transport mode (SEK million)

Of which
Investments SEK 17,954 million
Maintenance SEK 17,833 million
Other operations SEK 4,326 million

Investments and maintenance measures make up approx. 90 per cent of the total purchasing volume

- Railways
- Roads
- All modes
Geographical distribution of the purchasing volume

- **North Region**: SEK 3,277 million (8%)
- **South Region**: SEK 4,817 million (12%)
- **Central Region**: SEK 5,253 million (13%)
- **West Region**: SEK 8,050 million (20%)
- **Stockholm/East Region**: SEK 12,255 million (31%)
- **National measures and central functions**: SEK 6,461 million (16%)
The Swedish Transport Administration’s total purchasing volume in 2017 was SEK 40,113 million, which is on the same level as in the preceding year. Investments and maintenance measures represent about 90 per cent of the total purchasing volume. The purchasing volume from the Swedish Transport Administration’s 10 biggest suppliers was SEK 21,894 million (about 55 per cent of the total volume).

The Swedish Transport Administration’s biggest suppliers are presented on the basis of group relationships.

*The Swedish Transport Administration’s biggest suppliers are presented on the basis of group relationships.*
### Key figures, Roads and Railways

#### Key figures, Roads

<table>
<thead>
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#### Key figures, Railways

<table>
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<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purchasing volumes, SEK million</strong></td>
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<td>7 806</td>
<td>8 262</td>
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<td>Investments incl. BEST</td>
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<td>2 788</td>
<td>2 902</td>
</tr>
<tr>
<td>Maintenance, basic contracts</td>
<td>3 552</td>
<td>3 543</td>
<td>3 351</td>
</tr>
<tr>
<td>Maintenance, other</td>
<td>4 298</td>
<td>3 930</td>
<td>3 834</td>
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<tr>
<td><strong>Number of suppliers representing 80% of the volume</strong></td>
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<td></td>
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<tr>
<td>Investments excl. BEST</td>
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<td>32</td>
<td>26</td>
</tr>
<tr>
<td>Investments incl. BEST</td>
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<tr>
<td>Maintenance, basic contracts</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Maintenance, other</td>
<td>43</td>
<td>37</td>
<td>46</td>
</tr>
<tr>
<td><strong>Number of tenders per procurement (average)</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Investments excl. BEST</td>
<td>3.0</td>
<td>2.6</td>
<td>3.4</td>
</tr>
<tr>
<td>Investments incl. BEST</td>
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<td>2.1</td>
<td>3.3</td>
</tr>
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<td>2.0</td>
<td>2.3</td>
</tr>
<tr>
<td>Maintenance, other</td>
<td>3.9</td>
<td>3.2</td>
<td>3.1</td>
</tr>
</tbody>
</table>
The European economic outlook

The economic situation determines the conditions for the civil engineering industry. This means that the potential for growth is closely linked to the recovery process among the 19 Euroconstruct members.

In 2017, investments in civil engineering production in the Euroconstruct countries amounted to about EUR 308 billion. The forecast for the total civil engineering market in the Euroconstruct countries is that investments will increase by 4.1 per cent in 2018 and by 4.4 per cent in 2019.

Ten countries have seen ongoing increases in investments in the civil engineering industry since 2007, but there are considerable differences between the individual Euroconstruct members. Many have instead been forced to cut back on infrastructure investments due to prolonged deficits and public debt.

In the western half of Europe it is the countries in the south and Ireland that have had the biggest reduction in investments. The biggest decline has been in Spain, which had the largest share of the total Euroconstruct market before the financial crisis (24.4 per cent in 2007).

Since 2011 it is Germany that has the biggest civil engineering market, with 18 per cent of total investments in 2017. The second biggest market is France, with a share of 14 per cent, followed by Italy and the United Kingdom with 11 per cent each. Spain has lost volume and currently has a market share of about 6.5 per cent, which is less than the Netherlands’ 7.3 per cent. The Nordic countries together have a market share of 13 per cent.
Euroconstruct’s civil engineering investments by country

Germany 18%
France 14%
Italy 11%
The United Kingdom 11%
The Netherlands 7.3%
Spain 6.5%

The Nordics 13%
Germany 18%

SUPPLIER MARKET ANALYSIS 2017
Definition of foreign suppliers

The basic principle is that a company is defined as foreign if more than half of the shareholders’ voting rights are held by one or more foreign owners. If a company is part of a group in Sweden, and the group’s main parent company is foreign-owned, the entire group is considered foreign. If a company has several ownership layers, it is the ultimate owner (i.e. the parent company), in turn not more than 50 per cent controlled by any other company, that determines the nationality of all the constituent companies.

The proportion of contracts awarded to foreign suppliers is at around the same level as in 2016, which is a result of the Swedish Transport Administration’s efforts to create bigger contract packages in large and complex projects. The chart below shows how the proportion of foreign companies has shifted from 2015 to 2017.
ANNEX 3B.
Proportion of small and medium-sized suppliers (SME)

Small and medium-sized suppliers (SME)

In 2017 the Swedish Transport Administration had a total contract volume of SEK 16,466 million (-13 per cent compared to the previous year). This sum was divided between 327 contracts in all. The contract value for small and medium-sized suppliers (SME) in 2017 was SEK 2,349 million (SEK 3,110 million in 2016), divided between 128 contracts (134 in 2016). The presentation includes object-specific contracts; in addition to this there are call-offs from framework agreements.

In the last few years the Swedish Transport Administration has entered into a number of construction contracts for major projects, which affects the proportion of small and medium-sized companies.

---

**Contract value for construction contracts, and SME share 2015-2017**

<table>
<thead>
<tr>
<th>Year</th>
<th>Contract value big suppliers value</th>
<th>Contract value SME</th>
<th>Proportion of SME in % of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>15,966</td>
<td>3,527</td>
<td>38%</td>
</tr>
<tr>
<td>2016</td>
<td>15,825</td>
<td>3,110</td>
<td>36%</td>
</tr>
<tr>
<td>2017</td>
<td>14,117</td>
<td>2,349</td>
<td>16%</td>
</tr>
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</table>

**Number of construction contracts entered into, and SME share 2015-2017**

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of contracts big suppliers number</th>
<th>No. of contracts SME</th>
<th>Proportion of SME in % of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>245</td>
<td>196</td>
<td>48%</td>
</tr>
<tr>
<td>2016</td>
<td>237</td>
<td>134</td>
<td>36%</td>
</tr>
<tr>
<td>2017</td>
<td>199</td>
<td>128</td>
<td>39%</td>
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</table>
The Swedish Transport Administration’s total purchasing volume for investments in Roads was SEK 8,933 million in 2017 (+18 per cent compared with 2016). The purchasing volume from the 10 biggest suppliers was SEK 6,167 million (about 69 per cent of the total). In 2017 there were 15 suppliers that together represented 80 per cent of the purchasing volume; in 2016 there were 22. This change is due mostly to volume increases in the major projects such as the E4 Stockholm Bypass and the West Swedish Package.

**Market shares**

<table>
<thead>
<tr>
<th>The 10 biggest suppliers* in investment, Roads:</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCC</td>
<td>1,320</td>
<td>986</td>
<td>911</td>
</tr>
<tr>
<td>Peab</td>
<td>1,146</td>
<td>883</td>
<td>714</td>
</tr>
<tr>
<td>Skanska</td>
<td>1,141</td>
<td>548</td>
<td>388</td>
</tr>
<tr>
<td>Svevia</td>
<td>641</td>
<td>636</td>
<td>503</td>
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<tr>
<td>SBT Sverige</td>
<td>369</td>
<td>218</td>
<td>96</td>
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<tr>
<td>Veidekke</td>
<td>341</td>
<td>209</td>
<td>224</td>
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<tr>
<td>ÅF</td>
<td>334</td>
<td>289</td>
<td>257</td>
</tr>
<tr>
<td>Implenia</td>
<td>323</td>
<td>276</td>
<td>190</td>
</tr>
<tr>
<td>JV Mariholmtunneln</td>
<td>308</td>
<td>425</td>
<td>257</td>
</tr>
<tr>
<td>Sweco</td>
<td>244</td>
<td>230</td>
<td>245</td>
</tr>
</tbody>
</table>

*The Swedish Transport Administration’s biggest suppliers are presented on the basis of group relationships.
ANNEX 4A. Investment in Roads, by region

- **North Region**: SEK 266 million (4%)
- **Central Region**: SEK 762 million (10%)
- **South Region**: SEK 941 million (10%)
- **West Region**: SEK 2,564 million (26%)
- **Stockholm/East Region**: SEK 4,253 million (43%)

**National measures and central functions**: SEK 147 million (7%)
The Swedish Transport Administration’s total purchasing volume of basic maintenance contracts, Roads was SEK 3,860 million in 2017 (~4 per cent compared with 2016). The purchasing volume from the biggest suppliers of basic maintenance contracts, Roads was SEK 3,857 million (about 99 per cent of the total). Basic contracts are mostly dominated by a small number of suppliers. Among these, Svevia maintained its dominant position.

### PURCHASING VOLUME 2017, in SEK million

3,860

**maintenance, basic contracts, Roads**

<table>
<thead>
<tr>
<th>Market shares</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>The biggest* suppliers in basic contracts:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Svevia</td>
<td>1,950</td>
<td>2,055</td>
<td>2,036</td>
</tr>
<tr>
<td>NCC</td>
<td>877</td>
<td>837</td>
<td>783</td>
</tr>
<tr>
<td>Peab</td>
<td>741</td>
<td>764</td>
<td>654</td>
</tr>
<tr>
<td>Skanska</td>
<td>158</td>
<td>235</td>
<td>291</td>
</tr>
<tr>
<td>BDX Företagen</td>
<td>50</td>
<td>16</td>
<td>26</td>
</tr>
<tr>
<td>Sandahls</td>
<td>44</td>
<td>46</td>
<td>41</td>
</tr>
<tr>
<td>Mesta</td>
<td>37</td>
<td>55</td>
<td>60</td>
</tr>
<tr>
<td>Other suppliers</td>
<td>3</td>
<td>24</td>
<td>25</td>
</tr>
</tbody>
</table>

*The Swedish Transport Administration’s biggest suppliers are presented on the basis of group relationships.
ANNEX 4B. Maintenance, basic contracts, Roads, by region

North Region
SEK 745 million
19%

Central Region
SEK 807 million
21%

West Region
SEK 832 million
22%

Stockholm/
East Region
SEK 743 million
19%

South Region
SEK 733 million
19%
Purchasing Volume 2017, in SEK million

6,093

Other maintenance, Roads

The Swedish Transport Administration’s total purchasing volume for other maintenance, Roads was SEK 6,093 million in 2017, which is on the same level as in 2016. Other maintenance comprises measures that are not carried out within the framework of basic contracts. The purchasing volume includes preventive and corrective measures on surfaced and gravel roads (about SEK 3,300 million), bridge and tunnel measures (about SEK 600 million), road markings, lighting and ITS services (about SEK 620 million), and bearing capacity and freeze-thaw protection measures (about SEK 1,376 million). The number of suppliers that together have 80 per cent of the purchasing volume was 21 (19 in 2016).

The purchasing volume of the 10 biggest suppliers was SEK 4,201 million (about 69 per cent of the total volume). The market shares of the 10 biggest suppliers vary from year to year; in 2017 Skanska’s share increased while Peab’s and NCC’s shares decreased.

### Market shares

**The 10 biggest suppliers* in other maintenance, Roads:**

<table>
<thead>
<tr>
<th>Supplier</th>
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<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Svevia</td>
<td>1,175</td>
<td>1,134</td>
<td>1,287</td>
</tr>
<tr>
<td>Skanska</td>
<td>870</td>
<td>726</td>
<td>806</td>
</tr>
<tr>
<td>NCC</td>
<td>773</td>
<td>843</td>
<td>880</td>
</tr>
<tr>
<td>Peab</td>
<td>673</td>
<td>844</td>
<td>672</td>
</tr>
<tr>
<td>BDX Företagen</td>
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<td>103</td>
<td>158</td>
</tr>
<tr>
<td>Lemminkämien</td>
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<td>165</td>
<td>302</td>
</tr>
<tr>
<td>Vattenfall</td>
<td>124</td>
<td>106</td>
<td>111</td>
</tr>
<tr>
<td>Sweco</td>
<td>106</td>
<td>137</td>
<td>143</td>
</tr>
<tr>
<td>Ramböll</td>
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<td>84</td>
<td>72</td>
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<tr>
<td>Sandahls</td>
<td>80</td>
<td>214</td>
<td>144</td>
</tr>
</tbody>
</table>

*The Swedish Transport Administration’s biggest suppliers are presented on the basis of group relationships.
ANNEX 4C. Other maintenance, Roads, by region

North Region
SEK 899 million
15%

South Region
SEK 810 million
13%

Central Region
SEK 1,203 million
20%

West Region
SEK 1,299 million
21%

Stockholm/East Region
SEK 1,506 million
25%

National measures and central functions
SEK 376 million
6%

South Region
SEK 810 million
13%
The Swedish Transport Administration’s total purchasing volume for investment in Railways, excluding BEST (track, power, signal and telecom) works was SEK 6,438 million in 2017 (−16 per cent compared with 2016). The purchasing volume from the 10 biggest suppliers was SEK 3,757 million, which is about 58 per cent of the total volume (on the same level as in 2016). There was a reduction in the bigger, specified projects in Railways in 2017, compared with 2016, and the actual volume was affected by investments being deferred. 25 suppliers together represented 80 per cent of the purchasing volume (a reduction on the previous year, when the number was 32). Skanska, Peab and NCC saw their market shares reduced, in part because some investment projects are in their concluding phase. NRC Group increased its share, partly through company acquisitions and partly through volume increases in e.g. renovation measures Ludvika–Frövi.

### Market shares

<table>
<thead>
<tr>
<th>Supplier</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCC</td>
<td>726</td>
<td>962</td>
<td>845</td>
</tr>
<tr>
<td>Sweco</td>
<td>640</td>
<td>554</td>
<td>523</td>
</tr>
<tr>
<td>NRC Group</td>
<td>479</td>
<td>107</td>
<td>63</td>
</tr>
<tr>
<td>Peab</td>
<td>412</td>
<td>469</td>
<td>647</td>
</tr>
<tr>
<td>AF</td>
<td>360</td>
<td>542</td>
<td>488</td>
</tr>
<tr>
<td>Skanska incl. Marieholmsbron HB</td>
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<td>703</td>
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<td>Cowi</td>
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<td>340</td>
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<tr>
<td>Bombardier</td>
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<td>235</td>
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</tbody>
</table>

*The Swedish Transport Administration’s biggest suppliers are presented on the basis of group relationships.*
ANNEX 5A. Investment, Railways, excluding BEST works, by region

North Region
SEK 209 million
3%

Central Region
SEK 821 million
13%

South Region
SEK 570 million
9%

West Region
SEK 1,797 million
28%

Stockholm/
East Region
SEK 2,507 million
39%

National measures
and central functions
SEK 534 million
8%

SUPPLIER MARKET ANALYSIS 2017
The Swedish Transport Administration’s total purchasing volume for investment in Railways, BEST works was SEK 2,513 million in 2017 (–10 per cent compared with 2016). The purchasing volume from the 10 biggest suppliers was SEK 1,783 million (about 71 per cent of the total). 16 suppliers together represented 80 per cent of the purchasing volume (17 suppliers in 2016). Skanska increased its volume, principally in the Tomtebo–Kalhäll project. NCC increased its volume in the Flackarp–Arlöv and Strängnäs–Härad projects, among others. Vattenfall increased its volume through investments in new feeders. In addition to the biggest suppliers, the Swedish Transport Administration has its Material Service department, part of the Purchasing and Logistics function, which ensures the provision of technically approved material. Its volume in BEST investment was SEK 220 million in 2017. For further information about material suppliers, see Annex 7.
ANNEX 5B. Investment, Railways, BEST, by region

North Region
SEK 262 million
10%

South Region
SEK 256 million
10%

Central Region
SEK 178 million
7%

West Region
SEK 325 million
13%

Stockholm/East Region
SEK 1,002 million
40%

National measures and central functions
SEK 490 million
20%

South Region
SEK 256 million
10%

SUPPLIER MARKET ANALYSIS 2017
The Swedish Transport Administration’s total purchasing volume for maintenance, basic contracts, Railways, was SEK 3,552 in 2017 (on the same level as in 2016). The purchasing volume from the biggest suppliers was SEK 3,443 million (about 98 per cent of the total). The concentration of suppliers in this area has increased over the years, and now comprises a small number of big actors. Infranord maintained its dominant position among these, but has seen its market share decrease in recent years. Strukton, VR Track and Infratek are all challengers that have increased their shares.

### PURCHASING VOLUME
2017, in SEK million
3,552

**maintenance, basic contracts, Railways**

<table>
<thead>
<tr>
<th>Market shares</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infranord</td>
<td>1 605</td>
<td>1 748</td>
<td>1 854</td>
</tr>
<tr>
<td>Strukton</td>
<td>1 105</td>
<td>1 006</td>
<td>803</td>
</tr>
<tr>
<td>VR track</td>
<td>519</td>
<td>523</td>
<td>408</td>
</tr>
<tr>
<td>Infratek</td>
<td>214</td>
<td>199</td>
<td>165</td>
</tr>
<tr>
<td>Other suppliers</td>
<td>109</td>
<td>68</td>
<td>121</td>
</tr>
</tbody>
</table>

*The Swedish Transport Administration’s biggest suppliers are presented on the basis of group relationships.*

Source: Agresso 201501–201712
ANNEX 5C. Maintenance, basic contracts, Railways, by region

North Region
SEK 382 million
11%

South Region
SEK 805 million
23%

Central Region
SEK 655 million
18%

West Region
SEK 697 million
20%

Stockholm/East Region
SEK 1,013 million
28%

South Region
SEK 805 million
23%
The Swedish Transport Administration’s total purchasing volume for other maintenance, Railways, was SEK 4,298 million in 2017 (+9 per cent compared with 2016). Other maintenance means measures not carried out within the framework of a basic contract. The purchasing volume includes maintenance measures and reinvestments in tracks (about SEK 2,100 million), power, signal and telecom (about SEK 680 million), emergency fault clearance and preventive maintenance (about SEK 1,100 million), project design (about SEK 235 million), and other maintenance (about SEK 180 million). The purchasing volume from the 10 biggest suppliers was SEK 2,114 million (about 49 per cent of the total). Infranord continued as the biggest supplier in the area, and in 2017 recouped volume that it had previously lost. Implenia and Veidekke have become established in railway maintenance and are challenging Infranord with growing volumes. In addition to the biggest suppliers, the Swedish Transport Administration has its Materialservice department, part of the Purchasing and Logistics function, which ensures the provision of technically approved material. Its volume in other maintenance was SEK 446 million in 2017. For further information about material suppliers, see Annex 7.
ANNEX 5D. Other maintenance, Railways, by region

- **North Region**: SEK 461 million (11%)
- **Central Region**: SEK 796 million (19%)
- **South Region**: SEK 666 million (15%)
- **West Region**: SEK 405 million (9%)
- **Stockholm/East Region**: SEK 1,043 million (24%)
- **National measures and central functions**: SEK 927 million (22%)
The Swedish Transport Administration’s total purchasing volume for engineering services and consultants in investment and maintenance, Roads, was SEK 1,711 million in 2017 (on the same level as 2016). This includes planning and project design, construction site follow-ups, studies, project administration, handover and completion. The purchasing volume from the 10 biggest suppliers of engineering services and consultants, Roads, was SEK 1,324 million (about 77 per cent of the total). The trend is for an increasing concentration of suppliers as a number of major acquisitions have been made in the last few years, which affects the market. 13 suppliers together represent 80 per cent of the purchasing volume (34 suppliers in 2016). ÅF is currently the biggest supplier of engineering services and consultants in Roads, while Tyrén increased its volume almost to WSP’s level.

<table>
<thead>
<tr>
<th>Key figures, Roads</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchasing volume, SEK million</td>
<td>1,711</td>
<td>1,767</td>
<td>1,777</td>
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<tr>
<td>Number of suppliers that together represent 80% of the volume value</td>
<td>13</td>
<td>34</td>
<td>24</td>
</tr>
<tr>
<td>Number of tenders per procurement (average)</td>
<td>2.9</td>
<td>3.3</td>
<td>4.0</td>
</tr>
</tbody>
</table>
ANNEX 6A. Engineering services and consultants, Roads, by region

- North Region SEK 170 million (10%)
- South Region SEK 171 million (10%)
- Central Region SEK 254 million (15%)
- West Region SEK 406 million (24%)
- Stockholm/East Region SEK 692 million (40%)
- Nationella åtgärder och centrala funktioner 18 mnkr (1%)
- Stockholmsamtalsområde/Öst 10%
The Swedish Transport Administration’s total purchasing volume for engineering services and consultants in investment and maintenance, Railways, was SEK 3,283 million in 2017 (on the same level as 2016). This includes planning and project design, construction site follow-ups, studies, project administration, handover and completion. The purchasing volume from the 10 biggest suppliers of engineering services and consultants, Railways, was SEK 2,306 million (about 70 per cent of the total). The trend is for an increasing concentration of suppliers as a number of major acquisitions have been made in the last few years, which affects the market. 18 suppliers together represent 80 per cent of the purchasing volume (28 suppliers in 2016). Sweco maintained its position as the biggest supplier. Ansaldo increased its market share through the ERTMS development project, and Peab increased its share through project design and preparatory works on the West Link. Peab’s share includes a number of engineering consultants as subcontractors.

<table>
<thead>
<tr>
<th>Key figures, Railways</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
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</thead>
<tbody>
<tr>
<td>Purchasing volume, SEK million</td>
<td>3,283</td>
<td>3,228</td>
<td>2,762</td>
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<tr>
<td>Number of suppliers that together represent 80% of the volume value</td>
<td>Engineering services and consultants, Railways</td>
<td>18</td>
<td>28</td>
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<tr>
<td>Number of tenders per procurement (average)</td>
<td>Engineering services and consultants, Railways</td>
<td>2.7</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Source: Agresso 201501–201712

*The Swedish Transport Administration’s biggest suppliers are presented on the basis of group relationships.
ANNEX 6B. Engineering services and consultants, Railways, by region

North Region
SEK 163 million
5%

Central Region
SEK 278 million
8%

West Region
SEK 912 million
28%

South Region
SEK 248 million
8%

National measures and central functions
SEK 450 million
14%

Stockholm/
East Region
SEK 1,232 million
37%
Suppliers of technically approved material

The Swedish Transport Administration buys technically approved material from approximately 230 suppliers. The Transport Administration ensures provision of technically approved material through its Materialservice department, which is part of the Purchasing and Logistics function.

In order to manage availability of material for corrective maintenance as well as planned projects, 80 per cent of it is provided from the Transport Administration’s own stocks. Technically approved material is assigned or provided by the Transport Administration for investments in BEST works, Railways, as well as maintenance, Railways. Since the decision to provide material was made in 2013, the proportion of provided material has increased as the model is used in more contracts.

The total purchasing volume was SEK 1,759 in 2017 (–17 per cent compared with 2016). The purchasing volume from the 10 biggest suppliers was SEK 1,185 million (about 67 per cent of the total volume).

The biggest suppliers of technically approved material

| Source: Agresso 201501–201712 |

<table>
<thead>
<tr>
<th>Market shares</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
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</thead>
<tbody>
<tr>
<td>The 10 biggest suppliers of technically approved material:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vossloh</td>
<td>330</td>
<td>319</td>
<td>485</td>
</tr>
<tr>
<td>Voestalpine</td>
<td>224</td>
<td>250</td>
<td>285</td>
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<tr>
<td>Bombardier</td>
<td>187</td>
<td>233</td>
<td>174</td>
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<tr>
<td>Abetong</td>
<td>152</td>
<td>191</td>
<td>209</td>
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<tr>
<td>Strångbetong</td>
<td>62</td>
<td>104</td>
<td>95</td>
</tr>
<tr>
<td>British Steel France Rail</td>
<td>56</td>
<td>52</td>
<td>0</td>
</tr>
<tr>
<td>Swarco</td>
<td>48</td>
<td>37</td>
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<tr>
<td>Nexans</td>
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<td>58</td>
<td>51</td>
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<tr>
<td>Bitterna Såg och Trävaru</td>
<td>42</td>
<td>53</td>
<td>63</td>
</tr>
<tr>
<td>Elektrokoppar</td>
<td>39</td>
<td>34</td>
<td>23</td>
</tr>
</tbody>
</table>
IT market and key figures

The Swedish Transport Administration’s total purchasing volume for IT was SEK 1,706 million in 2017 (+6 per cent compared with 2016). The purchasing volume for IT is defined on the basis of IT accounts. The purchasing volume from the 10 biggest IT suppliers was SEK 1,055 million (about 62 per cent of the total). The trend is for an increasing concentration of suppliers.

The Swedish Transport Administration has agreements with CGI that run until 2018 and 2020, respectively, excluding options. These agreements comprise deliveries of workplace services, development and management of applications, and IT consultants. This makes CGI the dominant IT supplier to the Transport Administration, with around 21 per cent of the total purchasing volume for IT. 27 suppliers together represent 80 per cent of the purchasing volume (32 suppliers in 2016). An increasing proportion of IT purchases are made via the Transport Administration’s framework agreements and via central government framework agreements.

### Key figures IT

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total purchasing volume, SEK million,</td>
<td>1,706</td>
<td>1,610</td>
<td>1,520</td>
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<tr>
<td>IT hardware</td>
<td>93</td>
<td>88</td>
<td>60</td>
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<tr>
<td>IT software including IT operation</td>
<td>554</td>
<td>445</td>
<td>325</td>
</tr>
<tr>
<td>IT consultants</td>
<td>579</td>
<td>546</td>
<td>615</td>
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<tr>
<td>IT telecom</td>
<td>288</td>
<td>292</td>
<td>278</td>
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<tr>
<td>IT data transmission</td>
<td>192</td>
<td>239</td>
<td>241</td>
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</table>

<table>
<thead>
<tr>
<th>Number of suppliers that together represent 80% of the volume value</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT purchasing volume, total</td>
<td>27</td>
<td>32</td>
<td>38</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of tenders per procurement (average)</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT total</td>
<td>2.2</td>
<td>1.5</td>
<td>1.8</td>
</tr>
</tbody>
</table>
Upplev supplier follow-up

Since 2014 the Swedish Transport Administration has been using a systematic method for assessing execution of delivery in project design and construction contracts, and for the delivery of goods and services. This is the national IT system called Upplev, which allows projects and deliveries from different suppliers and regions to be assessed and compared in a fair manner.

The method is based on standardised assessment templates where the client rates the execution of delivery in terms of delivery reliability (time), quality, economy, environment and sustainability, safety, traffic, documentation, technology and development, and cooperation and communication.

Upplev is carried out every six months or yearly by the Transport Administration’s clients (project managers), with business support from the buyers. Upplev is an important tool for the continuous improvement efforts of each project. It can also be used to give bonuses for important part-deliveries, and could eventually also serve as a tool for qualification or adding value.

The chart below shows the average result of 750 completed assessments (made until December 2017) in project design (i.e. delivery from engineering consultants), new construction and conversion contracts, and basic contracts (i.e. maintenance contracts in Roads and Railways). Ratings are on a four-point scale. A grade of 3–4 points is good, 2–3 points is acceptable but needs improvement, and 0–1 points is bad and must be improved.

Among other things, the chart shows cooperation and communication receiving consistently good marks, which indicates that the climate for cooperation on the projects is good.
Development-promoting business

Development-promoting procurements are ones in which new or different solutions are not excluded; instead the Swedish Transport Administration promotes development by giving opportunities and motivation to suppliers for development and innovation. It is the Transport Administration’s ambition to make all its procurements development-promoting to the extent that this is feasible with respect to the specific circumstances and goals of the individual procurement. Measures that can promote development and innovation include early dialogues with the market, operational requirements and innovation bonuses.

In order to put additional focus on development and innovation in the supplier market, and to guide operations towards creating better conditions for this, the Transport Administration has since 2016 been using the measure Share of development-promoting procurements as an indicator and motivator tied to the Transport Administration’s strategy chart. This means that all of the Transport Administration’s operations are measured and followed up as to what proportion of procurements promote development (from 2018 it will be the proportion of development-promoting business that is measured).

This measurement and follow-up have had an effect on development-promoting efforts internally. The results show that the proportion of development-promoting procurements by the Transport Administration has increased annually, from about 7 per cent in 2015 to about 15 per cent in 2016, and to 23 per cent in 2017.

Source: The Swedish Transport Administration's procurement system

The Swedish Transport Administration is particularly focused on promoting development and innovation in procurements of contracts and of consultants for planning and project design. This can be seen in the statistics for the purchasing categories that have the greatest number of development-promoting procurements. The four purchasing categories with the greatest number of development-promoting procurements are:

- land contracts
- engineering consultants for planning and project design
- basic contracts, Roads (maintenance)
- BEST contracts

The distribution of development-promoting procurements between Roads and Railways was fairly even in 2014, while in 2015–2017 procurements in Roads dominated, see the chart below.
Suppliers awarded the greatest number of development-promoting procurements 2014–2017

The Swedish Transport Administration’s ambition is for all its procurements to be development-promoting to the extent that this is feasible with respect to the specific circumstances and goals of the individual procurement. The goal from 2018 is therefore that the proportion of development-promoting procurements and business continues to increase every year.

The Transport Administration’s intention is also to continue choosing design-build contracts (where conditions for it are present) and to strive for increased degrees of freedom and less control of details. This is to increase suppliers’ scope for profitability in the development of methods, products, processes and other solutions.

The suppliers that were awarded the greatest number of development-promoting procurements in 2017 were Peab, NCC and Svevia.

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The 10 biggest suppliers with development-promoting procurements

![Bar chart showing the number of development-promoting procurements for 10 suppliers over the years 2014 to 2017. The chart displays data for Peab, NCC, Svevia, Sweco, Infranord, ÅF, Skanska, WSP, Veidekke, and VR Track.]

Source: The Swedish Transport Administration’s procurement system
Background
Social contract requirements have been included in the Swedish Transport Administration’s procurements since 2014. Employment promoting measures, which are part of the societal requirements, were introduced in 2016.

Aim
The societal requirements are intended to counteract wage dumping, undeclared work, discrimination and corruption, among other things. No person may be exploited or come to harm, laws must be followed, competition must be fair, and the Swedish Transport Administration is to work for equal treatment in an industry that is credible and attractive. Uncovering bad conditions is often difficult, and the assessment of the Transport Administration’s management is that insufficient follow-ups of societal requirements in contracts constitute a serious risk. These requirements are made as special contract conditions that have to be fulfilled in work at all levels of the supply chain, throughout the contract period. Societal requirements regulate:

- minimum wages, minimum conditions and fundamental rights for employees throughout the supply chain
- taxes and social insurance charges
- anti-discrimination
- positions on ethical issues

Expanded follow-up
Since the autumn of 2016 follow-ups of societal requirements have become more systematic through the use of a new model, also intended to ensure special focus on contracts that imply particular risk. Follow-ups have to be carried out with a certain frequency at supplier meetings, through suppliers’ own attestation (known as declarations) as well as through supplier audits. Supplier audits of 28 selected contracts were carried out in 2017 to ensure compliance with contract requirements. In general, suppliers have procedures, collective agreements, equality initiatives and codes of conduct in place to deal with the requirements, but they are not always effectively transferred to the subcontractor level. It has not, however, come to the Transport Administration’s attention that any person has come to harm in the audited contracts.

The Transport Administration has continued its collaboration with the Swedish Tax Agency, the Swedish Work Environment Authority and the Swedish Economic Crime Authority on the Stockholm Bypass project. Further collaboration, mainly with the Tax Agency, is occurring on other types of investments. The Transport Administration has expanded its whistleblower system (and had it translated into several languages). If anyone suspects corruption, bribes, conflicts of interest, irregularities in working conditions, or infractions of tax legislation, they can report it anonymously.

With respect to employment promoting measures, a new follow-up model was introduced in September 2017. Outcomes are difficult to forecast over time, as the requirements may be fulfilled at any time during the contract period. It is estimated that half of the jobs will be generated in large contracts with contract periods of up to 10 years. In the period from December 2016 to November 2017, 115 procurements were advertised with employment promoting measures, of which 268 were employment requirements and 386 were bonus places. The result is reported and aggregated every three months into employment and internship months.

During the period measured, the requirements resulted in 70 executed employment months and 43 executed internship months.

An online course has been designed with the aim of developing skills within the Transport Administration’s purchasing organisation regarding social contract requirements and follow-ups. About 400 people attended the course in the period from September to December 2017.

Developments in 2018
Further audits of investment and maintenance projects are planned during 2018. More employees are also expected to attend the internal training course on social contract requirements and follow-ups.

The Bolagsdeklarationen (company declaration) tool will be launched in 2018, within the framework of ID06. This provides continuous deviation reports in real time of unpaid taxes and charges, among other things, from suppliers whose employees have registered in an electronic staff ledger. Provided that a construction contract has been registered in Bolagsdeklarationen by the Transport Administration, a project manager can receive notifications that a supplier or subcontractor has unpaid taxes or charges.

In summary, the goal is to use clear requirement specifications, early information, sector collaboration and risk-based follow-ups to create circumstances for ensuring fair and reasonable employment conditions in the civil engineering sector.
ANNEX 11.
Environmental and climate requirements in the Swedish Transport Administration’s procurements

The Swedish Transport Administration carries out extensive procurement activities, and the objects of these procurements frequently have a considerable environmental impact from a life-cycle perspective. This has made requirements specifications in procurements increasingly important as part of the strategy for developing a transport system that will become sustainable in the long term.

The Transport Administration’s environmental requirements cover:
• planning activities, where there are requirements for environmental assessments or environmental impact studies of major plans and all project operations
• construction contract operations, by means of general and object-specific requirements on project execution
• the occurrence of hazardous substances in procurements of technically approved railway material (implemented in 2012)
• procurements of services and goods transports
• climate considerations when planning, building and maintaining infrastructure.

General environmental requirements for contracts are drawn up together with the city administrations of Stockholm, Gothenburg and Malmö. Coordinating requirements makes it easier for the sector to adapt to new requirement specifications in a way that allows the contracting industry to plan for cost-effective adaptation. The requirements are also applied by other clients, such as smaller municipalities. The current requirements were adopted in 2012. In 2017 they were evaluated and revised, and updated general environmental requirements will begin to apply at the beginning of 2018.

The Swedish government and Riksdag earlier adopted the vision that Sweden by 2050 will have a sustainable and resource-efficient energy supply, without net emissions of greenhouse gases. This vision also applies to transport infrastructure, and the Transport Administration has therefore adopted its own vision of a climate-neutral infrastructure by 2050. Along the route to achieving this, the Transport Administration has defined interim targets to the effect that its carbon footprint will be reduced by 15 per cent by 2020 and by 30 per cent by 2025. These targets are the basis for the climate requirements that the Transport Administration has determined that it will impose on infrastructure.

The climate requirements were introduced in February 2016 and apply to new investment projects exceeding SEK 50 million and set to open for traffic in 2020 or later. The climate requirements for these infrastructure projects cover planning, project design and construction. Since the requirements are for life-cycle emissions, operations and maintenance after completion are also included. The requirements also apply for technically approved material that the Transport Administration purchases. Climate requirements were made in 2017 for the procurement of concrete sleepers for railway infrastructure.

For projects that will open for traffic between 2020 and 2024, the requirement is for a 15 per cent smaller carbon footprint, on average, compared to a 2015 baseline. For projects opening for traffic in 2025 or later, the requirement is for a 30 per cent smaller carbon footprint.

If the reduction exceeds the requirement, the contractor will receive a bonus in accordance with the bonus model. If the requirement is not fulfilled, the contractor will not receive a bonus even if the execution of the project would have merited a bonus in other respects, e.g. by exceeding the criteria for quality of delivery. Failure to fulfil the carbon footprint requirement will in other words be penalised despite requirements being exceeded in other areas.