



# European Construction Sector Observatory

Policy fact sheet

**Denmark**

Preventive Occupational Safety and Health (OSH)  
Service Bus for the Construction Sector (Bam-Bus)

Thematic objective 2

February 2020

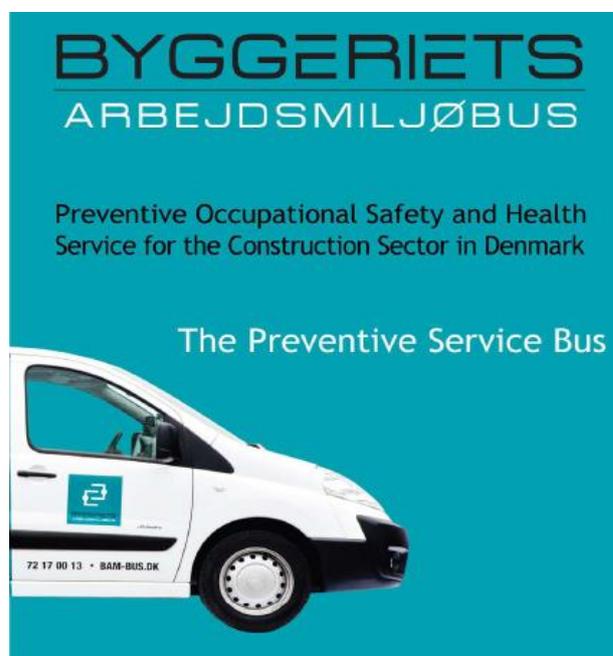
# In a nutshell

Implementing body	<i>Byggeriets Arbejdsmiljøbus</i> (Preventive Service Bus) – a non-governmental service institution that is funded by the Construction Sector Development Fund ( <i>Byggeriets Udviklingsfond</i> ).
Key features & objectives	Mobile consultancy service that disseminates and advises onsite companies on health and safety good practices in construction. Services are delivered on client premises across the country and an advisory hotline is also available.
Implementation date	2008 – ongoing
Targeted beneficiaries	Construction companies and employees.
Targeted sub-sectors	All construction sub-sectors.
Budget (EUR)	EUR 1.1 million (DKK 8.2 million <sup>1</sup> ) per year.
Good practice	★★★★☆
Transferability	★★★★★

The **Preventive Occupational Safety and Health (OSH) Service (*Byggeriets Arbejdsmiljøbus*** – otherwise known as ‘**Bam-Bus**’), as shown in Figure 1, is a mobile consultancy service that disseminates OSH good practices in the workplace and provides advice to construction companies and onsite teams.

The aim is to improve the application of preventive OSH practices in construction sector working environments. Bam-Bus services are mainly delivered on construction sites and on construction company premises. Customers can also access advice remotely by calling the Bam-Bus advisory hotline.

Figure 1: Bam-Bus



Source: Bam-Bus<sup>2</sup>

Bam-Bus also provides advice and guidance to builders, building consultants and design architects, as well as engineers on construction management, occupational safety coordination, site layout, common safety measures and the development of a safety culture on a construction site. In addition, a Knowledge Service for builders and consultants, in connection with Bam-Bus, has been set up and can be accessed via the Bam-Bus website<sup>3</sup>.

Bam-Bus is neither a control authority, nor a commercial OSH consultant or training provider. Bam-Bus is the result of an agreement between key construction sector organisations to disseminate OSH good practices throughout the sector. Bam-Bus is funded by the Danish Construction Development Fund and provides free of charge services to industry clients.

**Since 2011, Bam-Bus consultants have visited 11,596 sites/companies, of which 7,668 were first time visits. However, with limited resources, it is difficult for a small Bam-Bus team to increase its reach and market share.**

## 1.

## General description

The **Preventive Occupational Safety and Health (OSH) Service** (*Byggeriets Arbejds miljøbus* – otherwise known as **'Bam-Bus'**) was established in 2008 by the Danish Construction Association (*Dansk Byggeri*), Wood, Industry and Building Workers' Union in Denmark (*Forbundet Træ-Industri-Byg*), United Federation of Danish Workers (3F), Danish Union of Plumbers and Pipefitters (*Blik- og Rørarbejderforbundet*), Danish Metalworkers' Union (*Dansk Metal*), Danish Union of Electricians (*Dansk El-Forbund*) and BJMF Copenhagen.

**'Bam-Bus' is a mobile OSH consultancy service, as shown in Figure 2, that promotes good practices and helps construction companies and onsite teams to address specific issues and challenges.**

Figure 2: Bam-Bus mobile consultancy service



Source: Bam-Bus annual reports<sup>4</sup>

The main objectives<sup>5</sup> of Bam-Bus are to:

- Disseminate practical OSH solutions, preventive measures and good practices to inform construction companies and onsite teams about the importance and benefits of a safer and healthier work environment;
- Help construction companies to set up, manage and improve preventive OSH practices within the workplace, ensuring that they are systematically applied and adhered to. This includes the development of OSH structures, policies and processes, and the selection of OSH representatives;
- Influence the thinking of employers and employees (managers and workers) to

encourage them to change their OSH behaviour, attitudes and practices;

- Participate in knowledge sharing with the Sectoral Working Environment Council for Buildings and Construction, affiliated organisations and other relevant OSH actors, such as developers and suppliers of technical aids, schools, builders, consultants, designers, engineers, etc.

To meet these objectives, Bam-Bus is:

- Providing preventive OSH advice to the construction sector;
- Offering a mobile advisory service, which is delivered by a small team of Bam-Bus consultants (recently increased from 8 to 10), each with their own preventive service bus;
- Visiting construction sites and companies across the whole of Denmark. The country is split into four regions and each is covered by two preventive service buses. There is also a central office;
- Primarily researching and contacting construction sites and companies, but also responding to calls for assistance<sup>6</sup>.

The Bam-Bus philosophy<sup>7</sup> is based on:

- Communication of OSH issues and solutions based on 'live' situations and contexts;
- Face-to-face dialogue with workers, safety representatives, coordinators, managers;
- Interpretation of guidelines, regulations and recommendations according to 'live' situations and contexts;
- Taking the time needed to solve the issue correctly;
- Constructive interaction with suppliers, structural designers and clients.

## 2.

## Achieved or expected results

The first few years of the Bam-Bus project (2008-2011) were dedicated to designing and developing the Bam-Bus concept and OSH content, and establishing the organisation and the Bam-Bus team.

**Since 2011, Bam-Bus consultants have visited a total of 11,596 construction sites and companies across the whole of Denmark, as shown in Table 1. That equates to an average of 1,450 visits per year, to date. Out of the total number of visits, 7,668 were first time visits, as a result of new contacts. That represents two thirds of all visits completed.**

Table 1: Bam-Bus – Overall results

Year	New companies / sites contacted	Company / site visits
2011	-	1,685
2012	1,180	1,674
2013	1,136	1,337
2014	1,087	1,327
2015	1,113	1,361
2016	1,103	1,354
2017	956	1,323
2018	1,093	1,535
<b>Total</b>	<b>7,668</b>	<b>11,596</b>

Source: Bam-Bus annual reports<sup>8</sup>

Table 3 shows the targets and actual results in relation to Bam-Bus visits to construction sites and companies. Complete data is only available for the 2013-2018 period. Targets and actual results for onsite and company visits are combined in Table 2, because a clear breakdown of the actual results (onsite vs company visits) is not published in the annual reports prior to 2018.

**Compared to its annual objectives for onsite and company visits, as defined in annual work plans, Bam-Bus achieved a success rate of at least 80% each year, and 90% or over in three of those years (2015, 2016 and 2018).**

The number of visits conducted between 2013 and 2017 are similar from one year to the next. That suggests that team size may be a factor limiting the number of visits that can comfortably be done by each team member – and therefore the team as a whole. With an average of 1,450 Bam-Bus visits completed per year, and a team size of 8 consultants (it has only recently increased to 10), the average number of visits per consultant amounts to about 181 per year. On the basis of an average of 47 working weeks a year in Denmark, that means that a Bam-Bus consultant typically spends about 77% of their time conducting visits.

Table 2: Bam-Bus – Visit targets vs actual visits

Year	Onsite / company visit targets	Company / site visits	% of target reached
2011	-	1,685	-
2012	-	1,674	-
2013	1,600	1,337	84%
2014	1,600	1,327	83%
2015	1,500	1,361	91%
2016	1,500	1,354	90%
2017	1,650	1,323	80%
2018	1,650	1,535	93%
<b>Total</b>	<b>9,500</b>	<b>11,596</b>	<b>-</b>

Source: Bam-Bus annual reports<sup>9</sup>

Bam-Bus annual reports<sup>10</sup> identify the main industry topics and challenges that Bam-Bus consultants have had to address in their work with clients in a particular year. In 2018<sup>11</sup>, for example, the key focus of Bam-Bus dissemination and advice was on:

- Development and use of technical aids to remove or reduce stress on muscles and the skeleton;
- How to prevent serious work accidents, including the separation of pedestrians and traffic, the risk of stumbles and falls, order and tidiness, crash danger, excavation and collapse danger,

respecting distances, cutting tools, and proper use of fall protection;

- How to remove dust from construction sites, using H-class vacuum cleaners for example, and measures to reduce dust production and propagation;
- How to deal with asbestos, PCBs and lead, particularly related to building renovation work;
- Appropriate building temperature and lighting;
- Assisting the integration of young and new employees into safer and healthier working environments;
- Workplace assessments in small businesses, with a focus on simplified methods;
- Scaffolding – including the division of responsibilities, choosing the correct type of scaffolding and the typical pitfalls when choosing scaffolding;

- Provision of OSH advisory services to foreign companies;
- Large buildings – this is a Knowledge Service activity involving the collection of experiences from new large state and regional buildings and civil engineering projects, with a view to identifying new ways to set up construction sites, and to coordinate and cooperate within the working environment;
- Communication of business experiences in relation to the registration and use of ‘near misses’ to encourage prevention.

## 3.

## Perspectives and lessons learned

### Clients value the local knowledge and solution-orientated approach of Bam-Bus consultants and services.

According to Lebæk A/S, a carpentry company in Aarup on Funen, the fact that their regional Bam-Bus consultant was from the same area and was known personally by the management team benefited to their working relationship. The client company was able to engage with the consultant from a position of familiarity and with an awareness of the consultant's knowledge and professionalism.

The client company has recently used Bam-Bus to advise on major roof replacement work on a number of homes in Assens, following a workplace assessment. They have also sought advice on the best technical aids to use when doing heavy lifting in areas with access issues. The client was very satisfied with the advice provided and confirmed they will use Bam-Bus services again. The difference, in their view, is that a call to the Labour Inspectorate, for example, would result in an explanation of the rules that apply to an issue or activity, whereas a call to Bam-Bus will result in a solution<sup>12</sup>.

### Bam-Bus is a valued OSH assessment and knowledge support partner for the construction sector.

NemByg A/S is a principal contractor based in Tjæreborg. The company has recently established an effective OSH structure and OSH practices, to support the company's growth aims. However, as they did not have the knowledge required to undertake an OSH implementation on their own, they contacted Bam-Bus for assistance.

Beginning with a workplace assessment, Bam-Bus accompanied NemByg through the entire OSH implementation process. As a result of this successful partnership, NemByg also used Bam-Bus services to deliver lectures on asbestos and safety,

as well as presentations for employees. They continue to use Bam-Bus services frequently, because they value their OSH expertise, which their own organisation does not possess<sup>13</sup>.

### Bam-Bus can be relied on to provide practical OSH solutions to any working environment challenge.

A carpenter-master from Systemhuset in Herning is a frequent and long-standing client of Bam-Bus, using their services 6 to 10 times per year. He has been a client since Bam-Bus first began operations. That working relationship has grown ever since, and the client now contacts Bam-Bus whenever he is faced with a work environment challenge. The client has received help to address challenges that include handling heavy lifting, PCBs and asbestos, selecting technical aids, updating their workplace assessment, and even when they are developing bids with OSH impact<sup>14</sup>.

TBS A/S, a carpentry and painting business in Skive, is another company that regularly contacts Bam-Bus when they need help to address practical challenges. A roofing job in Løgstør serves as an example. Although the scaffolding was perfectly secure, the company was unsure whether it was also safe to move about on the roof itself. They contacted Bam-Bus and were able to apply some good solutions. Another instance involved doubts about the rules governing truck driving courses. In this case, the Bam-Bus consultant helped the company to write a letter to the Work Safety Authority to seek clarification of the rules<sup>15</sup>.

### Bam-Bus provides a high-quality service but is constrained by limited resources.

Bam-Bus has operated for most of its existence with a team of just 8 consultants, which are required to cover the whole of Denmark. The team has recently grown to 10 consultants, but that number is still too small to effectively address the OSH needs of the domestic construction sector.

## 4.

## Conclusion and recommendations

As a mobile OSH consultancy service, Bam-Bus is both original and well-run. Although it has not quite achieved its target number of visits each year, it has consistently achieved a success rate of at least 80% year on year, and over 90% for a few of those years.

**Bam-Bus has earned credibility in the Danish construction sector and is recognised across the country as an OSH expert and solution provider. Bam-Bus clients are overwhelmingly positive about the solutions and service levels that they receive. Clients particularly value the fact that they can rely on Bam-Bus consultants to provide practical solutions to practical problems and challenges. As an indication of client satisfaction, many have been regular clients for a number of years, relying on Bam-Bus expertise whenever they face a working environment challenge.**

Despite this relative success, there is room to improve its impact. The scale of service that is possible with a small team of consultants (recently increased from 8 to 10) is rather limited. Given that the team is meant to provide full geographical coverage of Denmark, greater human and financial resources would be needed to scale the service.

Looking forward, two recommendations are suggested to help improve the impact of Bam-Bus:

- Consideration should be given to expanding the size of the Bam-Bus consultancy team beyond the current 10 team members. A larger team, if resources permit, would be better positioned to address the construction sector's need for

expert OSH advice and assistance. The large number of smaller businesses would particularly benefit from such a recommendation;

- To support the expansion of the Bam-Bus consultancy team, consideration should be given to alternative funding options and/or models as a means of increasing (and sustaining) financial resources at Bam-Bus.

**Overall, Bam-Bus is rated as a '4-star good practice measure' on a scale of 1 (low) to 5 (high).**

Bam-Bus is scored as a 4-star 'good practice measure' because it has fallen slightly short of its targets each year. Given the originality of the measure, had it achieved its targets, it would certainly have obtained a 5-star rating. Moving forward, a top score is attainable if annual targets can be met, and especially if the service can be scaled up over the coming years.

**Bam-Bus is rated as a '5-star transferable measure' on a scale of 1 (low) to 5 (high).**

The simplicity and originality of the Bam-Bus concept – a mobile OSH consultancy service that visits construction companies and sites – suggests that this measure would be highly transferable to other countries. It is a relatively straightforward concept to implement, providing that there is an effective and adequately resourced team and organisation in place to deliver the level of service required by construction companies and sites in the target country or region.

# Endnotes

- 1 Byggeriets Arbejdsmiljøbus (Bam-Bus), Fact Sheet:  
<http://paritarian-funds-construction.eu/files/38/dk-bam-bus.pdf>
- 2 Byggeriets Arbejdsmiljøbus (Bam-Bus), English Factsheet:  
<https://www.bam-bus.dk/wp-content/uploads/2017/11/Engelsk-folder-web-light.pdf>
- 3 Byggeriets Arbejdsmiljøbus (Bam-Bus):  
<https://www.bam-bus.dk>
- 4 Ibid.
- 5 Byggeriets Arbejdsmiljøbus (Bam-Bus), Annual Report (Årsberetning) 2018:  
<https://www.bam-bus.dk/wp-content/uploads/2019/07/%C3%85rsberetning-2018-Godkendt.pdf>
- 6 Ibid.
- 7 Ibid.
- 8 Byggeriets Arbejdsmiljøbus (Bam-Bus), Om Os, Årsberetning/rapport (2012-2018):  
<https://www.bam-bus.dk/om-os/>
- 9 Ibid.
- 10 Ibid.
- 11 Byggeriets Arbejdsmiljøbus (Bam-Bus), Annual Report (Årsberetning) 2018:  
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- 12 Byggeriets Arbejdsmiljøbus (Bam-Bus), Jubilæumsavis 2008-2018:  
<https://www.bam-bus.dk/wp-content/uploads/2018/09/web-294646-avis.pdf>
- 13 Ibid.
- 14 Ibid.
- 15 Ibid.