Briefly described are the financing, function, and organization of the Swedish Institute for the Handicapped established in 1968. Reported are increased funding by the Swedish government from 3.5 million Swedish kronas (Skr) in 1950/51 to over 200 million Skr (equivalent to 45 million U.S. dollars) in 1972/73 for technical aids and improved housing for the handicapped, and distribution of aids by County councils. Diagramed is a plan of the Ministry of Health and Social Welfare for local and national governmental management of aids for the disabled. The following are among governmentally regulated Institute activities: observation of technical aid development, program preparation for research and development, coordination of regional programs, and analysis of personnel training needs. The Institute is reported to have a staff of 80 technical, paramedical and professional employees, to cooperate with 60 government offices and 20 organizations for the handicapped and to operate on income (7 million Skr in 1972/73 derived mainly from the government. Noted is cooperation of the Institute with the Board of Technical Development in planning of research and development of technical aids. Testing and evaluation of aids is said to focus on selection criteria emphasizing safety and low costs, and to involve cooperation with other institutes such as the Karolinska Institute. Cited is the role of the International Center of Technical Aids, Housing, and Transportation (under the Institute's auspices) in investigating joint international testing of aids. Discussed are product development, information dissemination activities such as conferences, investigations, and organizational aspects. An organizational diagram of the Institute is included. (MC)
The writer's name placed in the square means that the author is responsible for the contents. The Swedish Institute for the Handicapped guarantees that the report has been accomplished according to established practice in the sphere. If the author's name is not placed in the square the Swedish Institute for the Handicapped is responsible for the contents.
THE SWEDISH INSTITUTE FOR THE HANDICAPPED - A SURVEY
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The Swedish system for supply of technical aids for the handicapped

Sweden's public investment in dwelling improvements and the development of technical aids for the handicapped has increased significantly. During the 1950/51 fiscal year the total appropriation for such purposes in the national budget amounted to Skr 3.5 million 1), in 1960/61 to Skr 10 million and in 1970/71 to Skr 160 million 2).

Table 1. Government support for technical aids and dwelling improvement for the handicapped (Skr Million)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Research grant through STU 3)</th>
<th>Government grants to:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Technical aids</td>
<td>Motor vehicles</td>
</tr>
<tr>
<td>1966/67</td>
<td>0.6</td>
<td>42</td>
</tr>
<tr>
<td>1967/68</td>
<td>0.9</td>
<td>53</td>
</tr>
<tr>
<td>1968/69</td>
<td>1.0</td>
<td>64</td>
</tr>
<tr>
<td>1969/70</td>
<td>2.5</td>
<td>81</td>
</tr>
<tr>
<td>1970/71</td>
<td>4.0</td>
<td>116</td>
</tr>
<tr>
<td>1971/72</td>
<td>3.8</td>
<td>135</td>
</tr>
<tr>
<td>1972/73</td>
<td>3.0</td>
<td>151</td>
</tr>
</tbody>
</table>

1) One Skr \(\approx 0,24\)
2) Population of Sweden approx. 8 million
3) STU (Styrelsen för teknisk utveckling) - The Board for Technical Development - is the government authority granting appropriations in the technical field.
The main share of the governmental support consists of the grants to technical aids, which for the fiscal year 1972/73 amounted to Skr 151 million. The division on different groups of aids is shown in diagram 1, below.

Diagram 1. Government grants via the National Swedish Board of Health and Welfare for technical aids for the disabled broken down by different groups of aids. Fiscal year 1972/73.

The handling of technical aids on local level is the responsibility of the county councils. These activities include prescription and distribution of aids, training, information, follow-up etc.

From Jan. 1st 1973 the county councils have also taken over the economic responsibility of some aids, primarily simple aids. During the fiscal year 1972/73 the National Board of
Health and Welfare has been consolidated through the establishment of a council for policy questions in the field of technical aids. Furthermore, a body for central purchase of certain types of aids has been established inside the Equipment Board for the Swedish Universities - UUH - in order to bring down the prices.

Diagram 2  Plan of the organization for governmental treatment of questions concerning technical aids for the disabled.
In order to administrate certain of the complicated questions involved, which comprise different fields of study and very different groups of technical aids, the Swedish Institute for the Handicapped was created in Stockholm on July 1, 1968 by joint action of the government and SVCR\(^4\). This latter organization had devoted itself to these problems over a long period of time.

The Institute's activities are regulated by the statutes formulated by the government. In accordance with these statutes, the Institute shall:

- observe developments in the field of technical aids,
- prepare and continuously revise a long-term programme for research and development work and for investigations and studies aimed at clarifying conditions in this field,
- coordinate such activities which are carried out in various places,
- collect and disseminate information concerning research and development projects which are planned, in progress, or completed and act as a general service organization for recommendations and information concerning projects of this type,
- disseminate information, in appropriate forms, on technical aids and other measures for the handicapped,
- ascertain the need of, initiate and participate in the training of personnel within this field of activity,
- initiate and participate in the testing and evaluation of technical aids and services for the handicapped and determine their suitability for the handicapped,
- make recommendations to the National Board of Health and Welfare on technical aids tested by the Institute,
- work out guidelines for individual adaptation of dwellings to various groups of disabled persons.

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4) SVCR (Svenska Centralkommitté för Rehabilitering) - The Swedish Central Committee for Rehabilitation - a private organization whose purpose is to stimulate the rehabilitation of the handicapped.
assist and collaborate closely with the National Board of Health and Welfare, county councils, the Board for Technical Development and other relevant national and municipal authorities, as well as organizations for the handicapped, companies and individuals active in this field,

- conduct library and documentation work in this field,
- observe international developments and collaborate with institutes and other organizations abroad which conduct similar activities with the purpose of benefiting from other results and experiences.

The Institute has a staff of technical, paramedical and other experts, in total some 80 employees.

The operating costs of the Institute are largely defrayed by the government and by income from certain activities (technical field activities, sale of publications, courses, etc.). SVCR is also supporting the Institute financially. The total budget for the 1972/73 fiscal year amounts to approx. Skr 7 million (see also diagram 3, below).

Diagram 3 The activities of the Swedish Institute for the Handicapped broken down by various functions. Fiscal year 1972/73,
As the following descriptions show, the work of the Institute is of a distinctly multi-disciplinary nature. The Institute continuously serves and cooperates with a total of some 60 government offices and other organizations, including about 20 organizations for the handicapped.

Planning of research and development (R & D)

The Institute has had the advantage of being able to engage highly qualified and interested technical experts within several fields of technical aids. In the R & D planning, these experts are cooperating closely with the Board for Technical Development (STU), which is responsible for the major share of R & D costs in this field (see note on page 1). In this connection the Institute primarily endeavour to obtain information about current requirements of technical aids among different groups of handicapped persons. The Institute is also assisting STU in the formulation and specification of R & D plans.

STU’s investments in technical aids for the handicapped up to the present are reported in the table below. The table shows that the grants have been largely utilized for technical aids for motor handicapped persons. However, this domination is progressively being reduced in favour of visio- and audio-technical aids.

Table 2. STU grants to R & D in respect of technical aids for the handicapped (Skr Thousand)

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>64/65</th>
<th>65/66</th>
<th>66/67</th>
<th>67/68</th>
<th>68/69</th>
<th>69/70</th>
<th>70/71</th>
<th>71/72</th>
<th>72/73</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing and speech aids</td>
<td>-</td>
<td>120</td>
<td>113</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>700</td>
<td>700</td>
<td>970</td>
</tr>
<tr>
<td>Visual aids</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>300</td>
<td>450</td>
<td>250</td>
</tr>
<tr>
<td>Aids for the motor handicapped</td>
<td>100</td>
<td>350</td>
<td>472</td>
<td>700</td>
<td>700</td>
<td>1400</td>
<td>1800</td>
<td>1550</td>
<td>1716</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>40</td>
<td>-</td>
<td>-</td>
<td>700</td>
<td>1200</td>
<td>1100</td>
<td>113</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>470</td>
<td>625</td>
<td>900</td>
<td>1000</td>
<td>2500</td>
<td>4000</td>
<td>3800</td>
<td>3049</td>
</tr>
</tbody>
</table>

The figures are approximate
**Testing and evaluation**

In the declaration concerning government grants for certain aids for the handicapped (SFS 1968:238) it is stated that, with the exception of simpler aids, technical aids shall have been tested by the Institute before being included in the list of such aids.

The primary aim of the testing and evaluation activities may be said to be the creation of a basis for the selection of the technical aids suitable for the handicapped with special consideration to security. This is intended to lead to a better and also relatively less expensive supply of technical aids. The primary goal for these activities is limited to the range of technical aids now existing. However, in the long-term view, the greatest advantages and profits of the testing and evaluation activities are presumably to be found in the feedback effect the test results should show in the next generation of technical aids. For example, up to the present the test results have, without work being especially directed towards this end, already resulted in several such feedback effects in the form of changes and improvements in existing aids. Several significant gaps in the present range of aids have also been revealed.

In its technical testing and evaluation activities the Institute cooperates with a number of other institutes such as the National Institute for Materials Testing and The Furniture Institute as well as specialized organizations such as the department of technical audiology at Karolinska Institutet for the testing of hearing aids. Functional testing of aids with handicapped persons as subjects is carried out through different medical clinics. International cooperation has also been established with other institutes, among which may be mentioned the British Research Institute for Consumer Affairs (RICA), which has conducted several testing programs concerning technical aids on behalf of the Swedish Institute for the Handicapped. During the last years some steps have been taken towards a Scandinavian cooperation in this field. The small size of the domestic markets in relation to the costs
for developing and testing such aids makes international cooperation extremely important in this field.

The International Centre on Technical Aids, Housing and Transportation (ICTA) is a Rehabilitation International body housed and run by the Institute (see organization-scheme page 12). ICTA has also started to investigate the possible interest in some countries with testing facilities for establishing a procedure for joint testing of aids for the handicapped.

**Product development**

The Institute develops certain products on its own within the field of technical aids and also has workshop resources for the manufacture of prototypes, etc.

The organization of the product development activities also includes the marketing of R & D results in series production through the establishment of contacts between designers and manufacturers. The normally very limited market for aids creates special problems with small and relatively unprofitable production-runs.

The National Board of Health and Welfare has Skr 1 million per year at its disposal for encouraging marketing of aids for the handicapped, which are of less commercial interest. In each case the Swedish Institute for the Handicapped is consulted.

**Information**

The Institute’s information concerning technical aids and their use is disseminated in various ways such as conferences, courses and training work, publications, films, exhibitions, library activities, etc.
Various types of training and educational work are continuously in progress within the Institute. During the last year the training of personnel for orthopaedic workshops has been improved and the educational schedule has been authorized by the National Board of Education. A systematic training has started at the vocational school at Jönköping. Courses for surgical clinic nurses in handling ostomy appliances is another example of these activities. Furthermore conferences of different types are continuously arranged.

The Institute's increasing production of publications giving information to consumers of aids, prescribers etc., about technical aids shall not be dealt with in detail here. However, the Institute's library service should be mentioned. This library has subsequently been augmented and is now probably the most comprehensive in Scandinavia within this special field. The material chiefly comprises literature relating to technical aids for the handicapped but also to other associated fields. Bibliographies on various subjects are issued by the library. Lists of new acquisitions are published monthly and summaries of registered articles in publications are published twice a year. The library does not only serve the Institute's personnel but to an increasing extent also persons outside the Institute. The library has also started to build up a film service.

The Institute's information work also includes supplying answers to enquiries of various types from the handicapped and from personnel in county councils, municipalities, etc. A panel of experts has been set up for this purpose. The Institute also has technical specialists who assist the county councils, primary municipalities, etc. on a consultant basis against renumeration in solving difficult technical rehabilitation problems.

Investigations

The Institute conducts investigations to a comparatively
comprehensive extent. This work includes e.g. economic, statistical or social aspects of the problems of the handicapped people. As basis for the Institute's planning of research and development need analyses, compilations of achieved project results and other introductory investigations are needed. Among the investigations carried out during the fiscal year 1972/73 can be mentioned a survey on the need of technical aids for laryngectomees, a survey on the need of optical aids for the visually handicapped and a survey on existing work aids. Furthermore an investigation on the adaptation of buildings and physical environment to persons with impaired vision can be mentioned.

Some organizational aspects

As was stated in the introduction, the Institute's activities cover a wide field. This means that various fields of knowledge must be combined in order to achieve an acceptable effect.

The experience of the consumers of the aids has been increasingly utilized and new methods are continuously being used in order to carry out need-analyses. Medical, psychological and sociological experts are also to a greater extent participating in the Institute's various projects in a more systematic manner.

Further, experience has been gained which indicates that the work should be concentrated to groups of aids, and this has to some extent been done (see sectors in the organization-scheme, page 12). A group of general experts with advisory functions has been formed for every aid sector. Each group has representatives at least for the consumers as well as the medical and technical experts. For the work of such a group, support is gained primarily from technical institutes and rehabilitation centres.

The connection between the medical field in particular and the activities of the Institute has been developed recently. For instance, clinical testing of hearing aids has been started.
at the Sahlgrenska Hospital's audiological department in Gothenburg. Hand orthoses are tested at the rehabilitation clinic at the hospital in Jönköping and hand prostheses at the orthopaedic-surgical clinic at the Karolinska Hospital in Stockholm. Other similar projects are being discussed at several rehabilitation institutions.

As the field of technical aids for handicapped persons is very wide and the costs for innovation, construction, testing and evaluation as well as marketing are comparatively high there are very good reasons for finding ways of international cooperation.

The Institute is therefore working for a continuous, international exchange of experiences and for creation of systems for cooperation. One example of these efforts is the annual collection of facts about projects going on in the Nordic countries concerning the problems of the handicapped. The result is published also in English and distributed to experts and institutions in different countries.

Karl Montan
Organization scheme of the Swedish Institute for the Handicapped

Board

Director

Technical Department

Planning- and coordination activities in the Field of:
- Hearing aids
- Visual aids
- Communication aids
- Orthopaedic aids
- Home aids
- Medical-technical aids
- Transportation aids

Testing unit and technical fieldwork

Product development unit

Information Department

Publication

Courses, conferences

International contacts (ICTA)

Library

Inquiries and educational visits

Exhibitions

Administration Department

Finances, personnel

Investigation

Adaptation of buildings and physical environment
<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>ISBN</th>
<th>Price (kr excl moms)</th>
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<tr>
<td>1/1972</td>
<td>Presentation of the Swedish Institute for the Handicapped - a survey</td>
<td>3150</td>
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<tr>
<td>2/1972</td>
<td>Teknisk undersökning av elektrisk armbåge - USAKREL</td>
<td>3150</td>
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<td>3/1972</td>
<td>P evning av handskar till handproteor</td>
<td>410</td>
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<td>4/1972</td>
<td>Verksamhetsberättelse för handikappinstitutets synsekter</td>
<td>410</td>
<td></td>
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<tr>
<td>1/1973</td>
<td>Handikappinstitutets projektverksamhet, Översikt av pågående projekt</td>
<td>410</td>
<td></td>
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<tr>
<td>2/1973</td>
<td>Nordisk samverkan inom handikappnästet och handikappinstitutets aktuella uppgifter inom denna samverkan</td>
<td>410</td>
<td></td>
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<tr>
<td>3/1973</td>
<td>Delrapport över det kliniska arbetet med ex- och flerfunktionsell handprotes, den s k SVEN-handen</td>
<td>4150</td>
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<td>4/1973</td>
<td>Förargivning av vred på hushållsmaskiner</td>
<td>6150</td>
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<tr>
<td>5/1973</td>
<td>Värdering av egenskaper hos stomibandage. Resultat från en enkätundersökning</td>
<td>4150</td>
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<tr>
<td>6/1973</td>
<td>Certain types of personal Hoists (2nd edition)</td>
<td>4150</td>
<td></td>
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<tr>
<td>7/1973</td>
<td>Landstingens hjälpmedelsorganisation</td>
<td>510</td>
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<td>8/1973</td>
<td>Handikapp och telekommunikation, Föredrag från ISIMA-konferensn</td>
<td>1210</td>
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10/1973 Utredning om behovet av tekniska hjälpmodeller för laryngektomerade
pris: 5:- kr exkl moms

11/1973 Telefon för döva, dövblind och talskadade
pris: 4:50 kr exkl moms

pris: 12:- kr exkl moms

Registration of nordic projects relating to disability 1973–07–01
pris: 10:- kr exkl moms

15/1973 Delrapport II över det kliniska arbetet med en- och flerfunktionell hand-
protes, den s k SVEH-handen
pris: 4:50 kr exkl moms