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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

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HEAVY TRANSPORT AND INDUSTRIAL DEVELOPMENT

THE BERLIET COMPANY'S EXPERIENCE

Submitted by the Government of France

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* Since the Government has submitted a very short paper, it is treated for purposes of reproduction and distribution as a summary paper and will be distributed in English, French, Spanish and Russian.

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HEAVY TRANSPORT AND INDUSTRIAL DEVELOPMENT

THE BERLIET COMPANY'S EXPERIENCE

All governments are very much concerned with the problems of transport and they are, therefore, very ready to consider the idea of the establishment of a heavy vehicle industry in their country. This is only feasible, however, if certain ancillary industries are already in existence there and if the local market is large enough to warrant such a policy.

In any case, the vehicles selected must be suited to local requirements and enough technicians must be trained to operate them efficiently.

(a) Selection of vehicles

Vehicles should be adapted to the means of communication; roads should not be built to suit the vehicles. If there are no made roads, the kind of vehicle needed is one which can travel almost anywhere without churning up the ground. On some terrains the driver can choose his route, but far more often the vehicle must take to random or rough and ready tracks. The vehicle should not damage the ground so much that the following vehicles are unable to pass. The vehicle builder must reconsider the kind of vehicle that is needed and must call in others to work on this problem. One very important element to be considered is the tyre. Joint studies by French heavy lorry builders and tyre manufacturers resulted in the use and development of tyres which permit travel when inflated at very low pressure. To put it in a nutshell, it might be said that the vehicle should be built round the tyre to produce a sturdy, robust, cheap and serviceable vehicle.

Robustness and cheapness do not by any means imply shoddiness or discomfort. It is perfectly possible to shelter drivers confronting harsh climatic conditions from heat, sandstorms, tornadoes and tropical rainfall in a cabin designed to spare them fatigue.

If suitable vehicles are to be selected, it must of course be feasible to have them assembled by workmen in the countries in which they are to operate or even for them to be built locally, at least in part, depending on local circumstances.

A first stage in assembly, known as SKD, is feasible in many countries. A second stage, known as CKD, is the complete assembly of vehicles from imported separate parts, such as stamped elements of the coachwork, which have to be welded, painted and lined. Where the series are large enough and if there is the requisite industrial environment, even the manufacture of the parts locally is feasible, starting with the simplest and progressively advancing to the most complicated.

(b) Training technicians

It is no use supplying suitable well-designed vehicles unless they are properly used and maintained. No one would think of entrusting an aircraft or railway engine to a complete novice. No more can one demand of workmen whose willingness is no substitute for competence to solve out of hand the complex problems of injection, braking and engine rate likely to arise in operating a part of lorries.

The BERLIET Company describes as follows the four standard methods it uses in the training scheme it has set up in Africa:

(i) Training on the job of staff assembling lorries in our African plants. Most of them are workmen with a basic elementary schooling but no practical industrial experience, and many of them are illiterate. For some of them it amounts to learning a trade which they have usually picked up by hit or miss methods without any theoretical training.

We were thus able to single out promising workers and to develop a progressive grading system leading to certified proficiency in the skill concerned and even to supervisors' jobs.

(ii) Our centres for training - or, to be more precise, of advanced training - offer short courses to workers - drivers or mechanics - already employed at garages or by hauliers. For a fortnight, they are given practical hints on maintenance or driving. Coached by an instructor ready to answer their questions they take down and re-assemble engines or parts, receiving the necessary explanations as they proceed.

The employers send their workers to these courses and the latter receive the continuous training they need if they are to cope with technical developments. The trainees remain in touch with their instructor and apply to him when they are held up by some problem at their own place of work.

They are sent technical papers. The training course is also designed to ensure that they are kept abreast of developments through refresher courses to which former trainees are invited.

The courses also enable us to identify a trainee's special aptitudes and thus to advise him and his employer on directing his work towards the tasks and responsibilities he will be able to take on after he has finished his training.

Our training programmes include arrangements for adapting the stages of training to the trainees' level, which does not mean training on the cheap, but training adapted to the circumstances. For example, we teach a driver to change an injector, a mechanic to regulate one and a specialist to repair one.

All these methods are used in the trainees' own countries under native instructors previously trained by us. This is an essential point to be stressed.

If there is to be any action, the masses must first be reached. Geographically first, the training must be within the trainees' grasp. Secondly, linguistically, the courses must be given in the language they speak and understand. If, therefore, the training is to reach as many people as possible, it must be given in their own country and by native instructors.

The whole scheme must of course be carried out in full collaboration with the ministries concerned, Education, Labour and Industry. We contribute our technical assistance within the framework set by the Governments.

(iii) Another aspect of our training scheme is a grading system of labour promotion for staff already qualified in some trade relating to automobiles. This type of training is sometimes given in our training centres or factories in Africa, but more usually in our factories in France under the supervision of our Technical School in specialized courses lasting from three months to a year. The trainees are workers nominated by their employers and chosen for their promise. Several Governments have sent us officials from various ministries to complete their specialized training and for preparation to act as senior staff supervising their compatriots on the job.

Half the trainees in our factory at Lyons come from this "Labour Promotion" group.

(iv) The fourth method we use differs from the others in two ways:

It is designed not for workers on the job, but for young persons leaving vocational schools or apprenticeship centres with a proficiency certificate.

They do not receive their training locally, but at our Technical School in Lyons.

The trainees are recruited by competitive examination conducted by the competent ministries in each country. The young people recruited are awarded fellowships and spend a school year in company with fellow-workers from all countries.

We have decided on a semi-boarding system, i.e. we house our young people in hostels specially for them, with bedrooms, reading-rooms, recreation and meals. The surroundings are as like a family as possible, and under a system of freely accepted discipline they are offered community, cultural or tourist activities and are put in touch with local families, so that the trainees enjoy as many human contacts as possible.

After the year of training, the trainee can be of real service to his country's economy. The best of them return for a second year, and, if they gain their proficiency certificate, for a third year, and thus become eligible for the professional certificate, which establishes them as fully-fledged technicians. We have had several encouraging successes and we even hope to take some of them as far as the technician's certificate, by which they become assistant engineers.

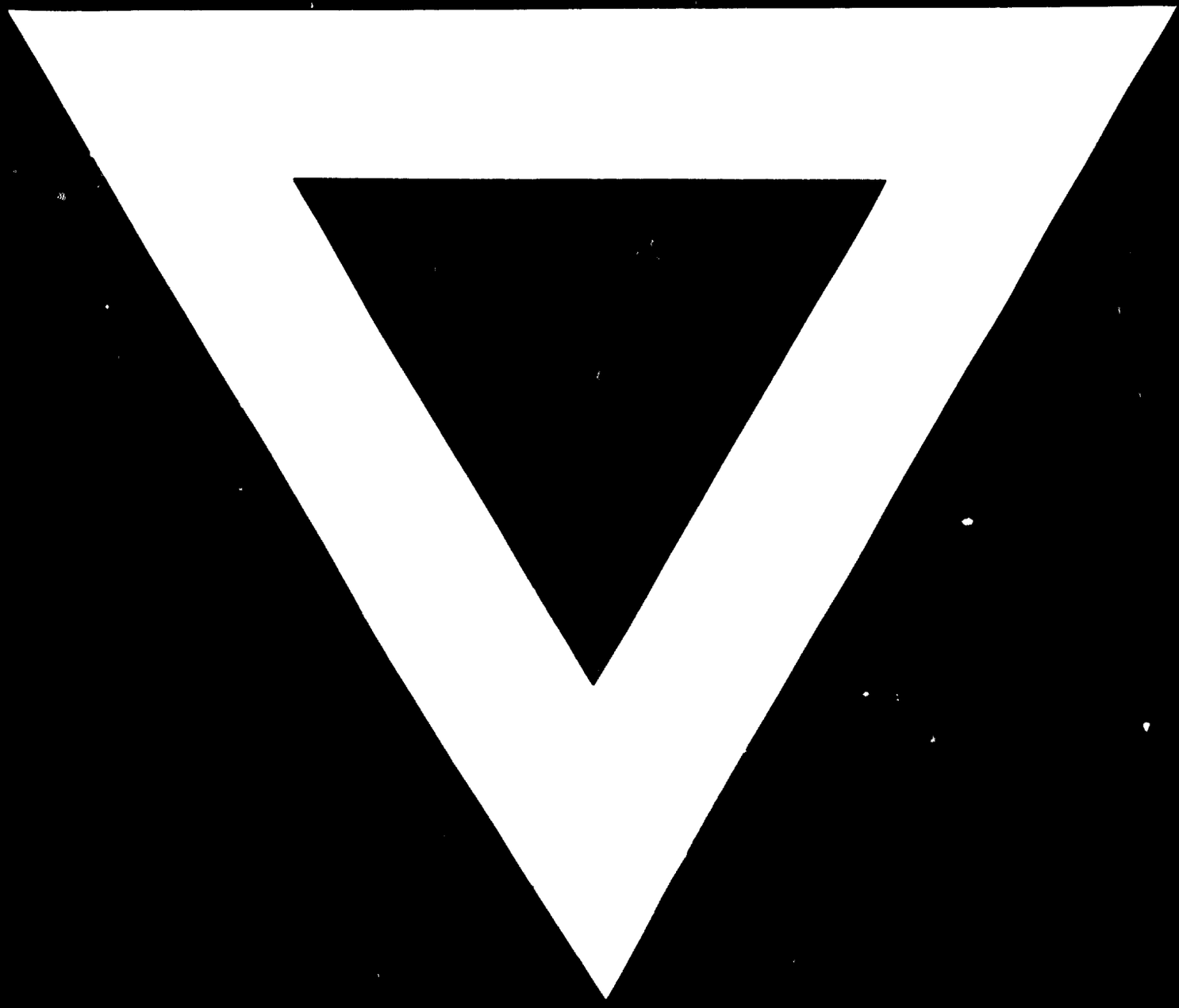
Most of them, of course, do not get so far. They are snapped up on their return by the administration or by private firms, and we next find them assistant teachers in apprenticeship centres or master craftsmen or technicians in public or private plants.

We keep a few on as instructors for our local centres, where they train their compatriots.

Eight centres in Africa are at this time training more than 2,500 technicians yearly. We shall undoubtedly increase this number.

Our Technical School trains some sixty instructors or technicians yearly.

Our centres are very often of use to national vocational schools by providing their pupils with more advanced practical training and assist ministries in organizing competitive examinations for proficiency certificates.



I. IO. 71