

Presentation of Ghatronic Foundation and the Digi-Mechanics School Project after the first seminars in 2022.

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Ghatronic Foundation International was registered with the Registrar-General's Department Accra-Ghana on 26th January 2018. Ghatronic Foundation International is a Non-Governmental Organization, works selflessly and does not pursue its own economic goals, is politically and denominationally neutral and upholds the principles of ideological tolerance.

VISION

- 1. Protection of automotive mechanics from unemployment**
- 2. Protecting the environment, combating climate change**
- 3. Promoting durable, inclusive, and sustainable economic growth**
- 4. Achieving gender equality**
- 5. Creating conditions under which qualified continuing education is accessible to all automotive mechanics**

Very soon, many young Ghanaians involved in traditional car repair will become unemployed as modern vehicles with electronic and digital systems will dominate the market.

To protect them from unemployment, Ghatronic offers seminars for car mechanics, trained mechanics, workshop owners or master craftsmen and all young men and women who are interested in IT technology. We organize the seminars in such a way that the training is accessible and affordable for everyone.

The participants of the seminars will learn how to diagnose and repair cars with diagnosis interface. We will organize collaboration between seminar participants and mechanics in the informal sector who may be illiterate or not speak English. Seminar participants will receive sustainable training that they can use to continue as multipliers and contribute to prosperity or economic growth.

Professionally maintained and repaired vehicles will reduce air pollution and fuel consumption, thus reducing CO2 emissions and contributing to a cleaner and healthier environment in Ghana.

Professional repairs will reduce waste.

Where possible, electronic engine controls will be optimized to best suit Ghana's climatic conditions, minimizing exhaust emissions.

Ghatronic will campaign for the introduction of unleaded gasoline to ensure the functionality of the catalyts.

After the initial basic training, there will be continuous further training, thus considering further developments of the manufacturers as well as supporting the transformation to electromobility.

Mandate of Ghatronic:

- 1. organization and implementation of high-quality qualified training for automotive mechanics, development of curricula, continuous training of mechanics.**
- 2. supporting auto mechanics to achieve full employment and decent work, and lasting, inclusive, and sustainable economic growth.**
- 3. training of trainers**
- 4. support for the establishment of "seminar containers" in existing workshops**
- 5. ensuring gender equality**
- 6. ensuring the sustainability of the project**

Details on point 1 and 2 (qualified further training, full employment):

Ghatronic intends to provide qualified competence-based training, thereby ensuring sustainable employment.

The original plan for the premises for the seminars has been improved. We are no longer centrally located at our place in Accra but go directly to the workshops. For a first test we successfully set up a seminar container of his workshop together with our trainer Evans Ato. On the other hand, there are institutions whose premises we can use for the seminars (such as the vocational school ATTC in Accra or the ITTU by the Technology Competence Centre (TCC) of the University KNUST with SMIDO in Suame Magazine in Kumasi).

For the mechanics, it is best if the seminars are held in the morning from 7 a.m. to 12 middays, afterwards the mechanics can then return to their workshops and continue to earn money and keep their customers.

Different levels of seminars are offered. The course content and curricula were developed in 2022 by the trainers with the help of WAVA. The Ghatronic trainers received a memory stick with the PowerPoint materials for their seminars. The equipment for the trainings in the existing seminar container (such as projector, lab boards, special tools, oscilloscope, various diagnostic modules, etc.) was handed over to the master trainer Evans Ato in December 2022. All seminars are designed as one-week seminars. We strive to have a maximum of 5 participants per trainer to train effectively.

In all seminars the theory is supported by many practical exercises.

The first seminar is the Basic Seminar, where participants learn the basics of vehicle electrics (practical exercises with multimeters, lab boards, etc.).

The second seminar is the Advanced Seminar, where the participants learn to detect fault codes generated by the diagnostic module and the significant differences between various diagnostic devices (practical exercises with diagnostic modules and other measuring devices).

The 3rd and 4th seminars are advanced training for car mechanics who perform more complicated repairs or who have undergone appropriate professional training.

The seminars are tailored to the educational background of the participants, so that at the end of the first two seminars of the project, the participants should be able to analyse the main defects of vehicles equipped with digital systems and use the acquired knowledge to repair identified defects.

The mechanics and trainers trained at Ghatronic will be multipliers: they will help vehicle mechanics in the informal sector who are illiterate or do not speak English when they have problems with a vehicle equipped with a diagnostic interface.

Training seminars will later be offered for all participants so that the mechanics can always keep up to date.

Details on point 3 (training of trainers):

Even before the forced lockdown due to the Covid pandemic, we had been able to inspire Evans Ato and Abraham Kyeremeh to work with us and become trainers. They were able to attend trainings at WAVA (West African Vehicle Academy) during our seminar lockdown and in addition online seminars took place by WOW! Würth Online GmbH. They are now our senior trainers. When we started our seminars in Accra and Kumasi in 2022, we also had specific trainings for trainers by our "Senior Expert" from Germany. After the first seminars in Accra and Kumasi we found 4 new trainers, so that we can now continue with 6 trainers. The new trainers are continuously trained by our senior trainers, through this "multiplier effect", we can then train as many mechanics as possible. The trainers are not hired by Ghatronic, but they are reimbursed for their expenses. In addition, our trainers are supported by WOW! See further in point 6.

Details on point 4 (seminar containers):

The "seminar containers" are set up in existing workshops. Workshop owners are financially supported to set up a "seminar container" on their premises. This container is used by Ghatronic for seminars for 5 years and can also be used as an office for the workshop. This way the distances for the participants are short and we only must take care of the special equipment, because the normal tools are available on site. In Ghana, the workshops are usually grouped in a certain area (cluster). So, it is possible to set up a seminar container in one workshop of a "cluster" and thus reach very many car mechanics.

Details on point 5 (gender equality):

The seminars are to be filled with equal numbers of men and women. They are also aimed at young women who are interested in IT technology and are interested in analysing digital faults in cars and helping mechanics. This project is currently being prepared, and from 2024 Ghatronic will be campaigning for special training courses for young women. A first step is that young women do not have to pay a seminar fee even now.

Details on point 6 (sustainability):

Ghatronic aims to become as independent as possible from donations and German experts in the next two years. We would like to achieve this by the following steps:

1. we will charge a fee for the seminars. Excluded from this are women and apprentices.
2. additional Ghanaian trainers will be generated from the participants for further seminars. Our trainers will be supported by WOW! Würth Online World GmbH more than generously. They receive a Snooper (diagnostic interface for the transmission of data from the vehicle) as well as the download of the diagnostic software on their laptops and the and professional support. In return, they agree to hold a certain number of seminars for Ghatronic for 3 years. The trainers can also use the diagnostic equipment for private purposes and earn money with it.
3. after the seminars we will perform digital vehicle diagnostics on customer vehicles for a fee.
4. by cooperating with organizations and companies in Germany (WOW! Würth Online World GmbH, Forum Afrikanum e.V., Chance for African Youth e.V.) as well as in Ghana (WAVA Academy; GIZ GmbH; University KNUST, Kumasi) the project will be supported with professional know-how.
5. premises for an external expert are available at the headquarters in Accra, Awoshie.

Current Activities till March 2023

The first Basic Course was held on March 30, 2022, followed by the first Advanced Course on April 4, 2022.

These seminars took place at the ATTC Accra.

After the first two seminars, two seminar days were held in Ahinsan and Suame, Kumasi. The participants were seven students from the Kumasi University of Technology and one female and one male student from Wioso Senior High School. The main purpose of the seminar in Kumasi was to generate trainers for Ghatronic.

In November and December 2022, we supported GIZ and KNUST University in their first seminar at Suame Magazine, Kumasi, during this period we also trained our trainers with the help of a senior expert from Germany.

A MoU between KNUST University and Ghatronic was developed and signed, it regulates the cooperation in Suame Magazine, this project is supported by GIZ. Three of our trainers are hired half-time for 1 year to hold seminars.

Ghatronic statutes and the Code of Conduct have been perfected.

On March 8, 2023, the seminars supported by GIZ at Suame started.

How you can support us

- We are looking for organizations, companies or private persons in Germany and Ghana who support us financially to multiply and further develop the Workshop with Diagnosis Seminars project throughout Ghana. For a more detailed description see "Workshop with Diagnosis Seminars" in the appendix. A complete seminar container will cost 4000 Euro, currently we have requests for three to four seminar containers. Of course, partial contributions will also help us. Please contact us for more information via info@ghatronic.com.
- We are looking for contact in any form to companies or individuals who can support us with used diagnostic modules, used laptops (preferably with English keyboard), projectors (beamer) and other teaching material.
- Knowhow in digital vehicle diagnostics - we are happy to meet "people from the field" who would like to support us pedagogically or technically.
- **Become a member of Ghatronic Foundation. The annual fee for members from Ghana is 250 GHS. Please contact us via info@ghatronic.com.**

- And of course, for further development, a donation through the account helps us:

- in Germany:

Forum Afrikanum e.V., IBAN:DE28 6009 0100 0526 5050 10, BIC: VOBADDESS

- in Ghana (Euro-Account):

Ghatronic Foundation International, Ecobank, MacCharty Hill Branch

Account Number: 3441000405023, Swift Code: ECOCGHAC

Abbreviations and links:

WOW! Würth Online World GmbH. www.wow-portal.com/web/de/wow/index.php

SES: Senior Expert Service (SES). www.ses-bonn.de

Foundation of German Industry for International Cooperation – non-profit organisation

ATTC: Accra Technical Training Centre, technical vocational school in Accra. <https://attcghana.com/>

KNUST: Kwame Nkrumah University of Science and Technology. <https://www.knust.edu.gh/>

TCC: Technology Competence Centre of KNUST. <https://tcc.knust.edu.gh/>

GIZ: organization of the Federal Republic of Germany that works internationally on behalf of various ministries of the FRG. <https://www.giz.de/de/html/index.html>

SMIDO: created by the various trade associations operating in and around Suame magazine. <https://www.smido.org/>

Suame Magazine: Industrial area in the Kumasi region with many workshops for metal technology and vehicle repairs, employing an estimated 200,000 people

ITTU Suame: Intermediate Technology Transfer Unit, Educational Institution in Kumasi, Suame

MoU: Memorandum of Understanding: Declaration of intent to enter a cooperation

Presentation Workshop with Diagnosis Seminars:

At an early stage, Ghatronic planned to support the best graduates of the seminars. They are to set up further digital mechanics centres in the workshops where they work and become trainers at Ghatronic. They are to be multipliers.

To achieve this goal, the "Workshop with Diagnosis Seminars" project is being launched.

Workshop owners will be supported with a loan and a grant to set up a small seminar room (for about five participants) where mechanics can be trained. The prerequisite is that either the workshop owner or a mechanic/master from this workshop has completed the courses at Ghatronic with an excellent result, or that the owner hires one of our trainers. The seminar room in the workshops can be e.g. a 40 ft container, which can be used as an office for the workshops outside of the seminar operation.

A container set up in Ghana (with sunshield, flooring, wall covering, etc.) costs max. 3500 Euro. In addition, 500 Euro for chairs, tables, a blackboard, a ceiling fan, and the electrical installation.

The financing of the container is contractually regulated, divided into:

50% grant and 50% loan.

The workshop owner will repay the loan in 12 instalments, starting immediately after completion.

A contract between Ghatronic and the owner specifies that at least 1 seminar (5 days from 7 a.m. to 12 middays) must be organized each month so that the grant does not have to be repaid. The content of the seminars is determined by Ghatronic, and the implementation is verified.

This approach has many advantages:

- the mechanics to be trained in the informal sector do not have to travel long distances to get there
- contact is established, the informal mechanics know where they can find answers to difficult repairs
- tools and infrastructure are available
- financial advantages for the workshop owners, container can also be used as an office
- a Ghatronic banner is installed on the container to attract customers
- in the Ghatronic headquarters only training courses for the "senior trainers" have to take place, they can also be organized online.

Banner on top of the Container: (180 cm x 40 cm; 6ft x 1.5 ft):

 GHA TRONIC foundation Digi-Mechanics-School-Project	Workshop with Diagnosis Seminars supported by GHA TRONIC FOUNDATION www.ghatronic.com
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The Team of Ghatronic

The Ghatronic Foundation International currently consists of four volunteer board members (founding members) and 6 volunteer trainers.

Wolfgang Theilacker-Beck

Chairman; Technical Advisor, Project Manager, Financial Auditor

Prof. John Kwasi Afriyie

Vice-Chairman; Educational Consultant, Legal Advisor, Financial Auditor

Charles Owusu Marfo

Secretary; accountant, head of finance department, treasurer

Ulrike Beck

Public relations consultant, sustainability, and gender equality consultant

Wolfgang Theilacker-Beck is a retired mechanical and automotive engineer. From 1995 to 1998 he was Managing Director of "Theilacker GMBH Motors Overhauling" in Stuttgart, Germany. From 1988 to 2020 he was Managing Director and Development Engineer of "WWT Medical Devices GmbH " in Stuttgart, Germany.

John Kwasi Afriyie, PhD, is a professor at the Department of automotive and agricultural engineering at Kumasi university of Technology (KSTU), specializing in renewable energy, thermofluids, machine maintenance and repair. He is an external examiner for postgraduate courses in the Faculty of Mechanical Engineering at KNUST. John Afriyie is a member of the Ghana Institution of Engineering (GhIE) and is currently the GhIE representative on the Ashanti Regional Co-ordinating Council's Regional Tender Review Committee. He is also a member of the Board of Directors of the Ramseyer Vocational/Technical Institute in Kumasi.

Charles Owusu Marfo is a professional economist with a master's degree in economics (specialization: small business development).

Ulrike Beck is a professional artist and educator. She was a lecturer at Nuertingen University in the Department of Urban Planning.

Volunteer Trainers:

Abraham Kyeremeh Addai, Senior Master Trainer

Evans Addison Ato, Senior Master Trainer

Christopher Ofosu Bonsu, Junior Master Trainer

Gabriel Owusu Twumasi, Junior Master Trainer

Amofo Richard, Training Assistant

Adu Boahene Richard, Training Assistant