

## **Presentation of Ghatronic Foundation and the Digi-Mechanics School Project**

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

### **VISION**

Ghatronic Foundation has the vision of

- 1. Protecting 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 high-quality continuing education is accessible to all automotive mechanics**

In the near future, many young Ghanaians involved in traditional car repair will become redundant as modern vehicles with electronic and digital systems will dominate the market.

To protect them from redundancy, 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. Ghatronic Foundation organizes the seminars in such a way that the training is accessible and affordable for everyone.

The participants of the seminars learn how to diagnose and repair cars with diagnosis interface. There is normally a collaboration between seminar participants and mechanics who may not have had high-level formal education. Seminar participants will receive sustainable training to enable them 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 to bring about further developments of the manufacturers and support the transformation to electromobility.

### **Mandate of Ghatronic:**

- 1. organization and implementation of high-quality training for automotive mechanics, development of curricula and providing 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. proving 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. Ghatronic is no longer centrally located in Accra but goes directly to the workshops. As a first test, a seminar container was successfully set up in the workshop of a Ghatronic trainer Evans Ato Addison. On the other hand, there are institutions whose premises can be used for the seminars (such as the vocational school ATTC in Accra or the ITTU of the Technology Consultancy Centre (TCC) of KNUST with SMIDO at Suame Magazine in Kumasi.

For the mechanics, it is best if the seminars are held in the morning from 7 a.m. to 12 noon, 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 Addison in December 2022. All seminars are designed as one-week seminars. We strive to have a maximum of 5 participants per trainer, to enhance effective training.

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 electricals (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 with low level of formal education who 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, Ghatronic had been able to train Evans Ato Addison and Abraham Kyeremeh to become trainers. They were able to attend trainings at WAVA (West African Vehicle Academy) during the seminar lockdown and in addition online seminars took place by WOW! Würth Online GmbH. They are now the senior trainers of Ghatronic Foundation. When the seminars began in Accra and Kumasi in 2022, some specific trainings were also given to the trainers by a "Senior Expert" from Germany. After the first seminars in Accra and Kumasi four (4) new trainers were found, so that the programme could then continue with six (6) trainers. New trainers can now be continuously trained by these senior trainers. Through this "multiplier effect", as many mechanics can be trained as possible. The trainers are not hired by Ghatronic, but they are reimbursed for their expenses. In addition, the 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 "seminar containers" on their premises. Such a 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 shortened and one must only 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 a lot of car mechanics.

**See also separate presentation "Workshop with diagnosis seminars", it is constantly updated and also contains the exact cost breakdown.**

**Details on point 5 (gender equality):**

It is the intention of Ghatronic to ensure that equal numbers of men and women participate in the programmes. The programmes 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 since 2024 Ghatronic has been campaigning for special training courses for young women. A first step is that young women do not have to pay a seminar fee for now.

**Details on point 6 (sustainability):**

Ghatronic aims to become as independent as possible from donations and German experts in the next two years. This is intended to be achieved through the following steps:

1. fees will be charged for the seminars. Women participants and apprentices will be excluded from this.
2. some more Ghanaian will be trained as trainers from among the participants for further seminars. These trainers will be supported by Würth Online World GmbH (WOW!). Each trainer will receive a Snooper (diagnostic interface for transmission of data from the vehicle) as well as the download of the diagnostic software on their laptops as well as professional support. In return, they will 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 digital vehicle diagnostics will be performed on customer vehicles for a fee.
4. by cooperating with organizations and companies in Germany like WOW!, Forum Afrikanum e.V., Chance for African Youth e.V., as well as in Ghana e.g. WAVA Academy; GIZ GmbH; KNUST, the project will be supported with professional know-how.
5. premises for an external expert are available at the headquarters in Accra, Awoshie.

## Activities

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 at Ahinsan and Suame in Kumasi. The participants were seven students from the Kumasi Technical University and one female and one male student from Wiaso Senior High School. The main purpose of the seminar in Kumasi was to produce trainers for Ghatronic.

Ghatronic got support from a Senior Expert, Guenther Mistele, a retired trainer in Automotive Technology from Germany, who was twice in Ghana to provide technical assistance for three weeks on each occasion.

With the help of this senior expert, Ghatronic supported GIZ and KNUST in its first seminar at Suame Magazine in November and December 2022 during which some more trainers were trained. An MoU was developed and signed between KNUST and Ghatronic. This MOU regulates the cooperation in Suame Magazine, and the project was supported by GIZ.

Ghatronic statutes and the Code of Conduct have been completed.

Ghatronic participated in the organization of the Auto Diagnostic Training Seminar in TCC Suame. On March 8, 2023, the seminars supported by GIZ at Suame started.

Since then, two of the trainers from Ghatronic have been hired part-time at the TCC.

Ghatronic also participated in the International Women's Day Celebration at TVET Directorate in Kumasi on March 2023 and further participated in the Engineering Day at TCC on March 2023.

In 2023, 2024 and 2025 the trainers were given further training.

Towards the end of 2024, Ghatronic got delivery of an AC service unit from Germany, a donation from WOW Germany.

## How you can support us

Ghatronic Foundation is still on the lookout for more organizations, companies or private persons in Germany and Ghana financial and to 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 there are requests for three to four seminar containers. Of course, partial contributions will also help. Please further information may be obtained via [info@ghatronic.com](mailto:info@ghatronic.com).

Ghatronic is also looking for contact in any form with companies or individuals who can support the foundation with used diagnostic modules, used laptops (with Windows 11 and English keyboard), projectors (beamer) and other teaching material.

In terms of Knowhow in digital vehicle diagnostics, Ghatronic would be happy to work with "people from the field" who would like to support the foundation pedagogically or technically.

Become a member of Ghatronic Foundation. Please contact us via [info@ghatronic.com](mailto:info@ghatronic.com).

- And of course, for further development, a donation may be sent to the following accounts:

### **- in Germany:**

Chance for African Youth e.V. (ChAYo), Volksbank Stuttgart eG

IBAN: DE03 6009 0100 0625 3470 05. BIC: VOBADES

Verwendungszweck: Ghatronic

### **- 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](http://www.wow-portal.com/web/de/wow/index.php)

**SES:** Senior Expert Service (SES). [www.ses-bonn.de](http://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 Consultancy 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

**WAVA:** West African Vehicle Academy, a joint venture of Bosch, KIA Ghana, GIZ.

## The Team of Ghatronic Since February 2024

The Ghatronic Foundation International currently consists of four volunteer board members and 5 volunteer trainers.

**Prof. John Kwasi Afriyie**

Founding member, Board member, Vice-Chairman; Educational Consultant, Legal Advisor, second Financial Auditor

**Evans Ato Addison**

Vice Chairman, Board member, Senior Master Trainer

**Charles Owusu Marfo**

Founding member, Board member, Secretary; accountant, head of finance department, treasurer

**Wolfgang Theilacker-Beck**

Founding member, Board member, Technical Advisor, Project Manager, first Financial Auditor

**Ulrike Beck**

Founding member, public relations and gender equality consultant

**John Kwasi Afriyie, PhD**, is a professor at the Department of Automotive and Agricultural Mechanisation 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 and Chemical Engineering at KNUST. John Afriyie is a member of the Ghana Institution of Engineering (GhIE) and was the GhIE representative on the Ashanti Regional Co-ordinating Council's Regional Tender Review Committee from 2019 to 2024. He was also a member of the Board of Directors of the Ramseyer Vocational/Technical Institute in Kumasi from 2018 to 2022.

**Evans Addison Ato** is a BSC Mechanical engineer, Certificate attained 2022 at Kwame Nkrumah University of Science and Technology (KNUST), Kumasi. 2017 he attained the H.N.D. Certificate at Kumasi Technical University (KSTU). He is self-employed at Roadwheel Engineering, a vehicle workshop at Ahinsan, Kumasi. Since 2019 he is Senior Trainer at Ghatronic Foundation, organizing seminars and developing teaching materials and curricula.

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

**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.

**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

Christopher Ofori Bonsu, Junior Master Trainer

Gabriel Owusu Twumasi, Junior Master Trainer

Amofo Richard, Training Assistant

Adu Boahene Richard, Training Assistant

Solomon Frimpong, Junior Master Trainer