**Hydro App**

**Scope – Description – 15.09.2016**

Development of Hydro App, extension from E-guide project

* **Quick description:** App enabling people to learn and apply the simplified hydroponic cultivation technique and providing tools to improve eating habits, access the market, further grow hydroponic knowledge, exchange with hydroponic community and access to experts
* **Target group:** people in food insecure urban slums (mostly mothers) or in other areas with limited access to healthy nutrition, e.g. refugee camps in desert areas. Many of those have not had access to more than basic school education, various not even that, so should be applicable for rather low levels of literacy. Overall the families live in poverty or with very little income and often suffer from malnutrition, also due to limited nutrition knowledge.
* **Style:** simple, easy to understand written explanations with supporting images. Usage of 1 -2 -3 steps instructions (always taking in mind that various of the participants have limited or no school education, a very small percentage also cannot read). Interactive elements
* **Format:** App accessible via web-access and mobile devices. Containing functionalities, also accessible, when offline (such as the basic instruction manuals etc.) and other functions, when online and with full bandwidth internet access. Manual part should also be available as easy print out (PDF) or brochure. Target is the most cost efficient solution, to be able to expand and replicate it without the most basic materials available. It should ideally be open format, to open it up to further developments enabled through the hydroponic community. Inspiration from app kitchenstories.io
* **Challenges:** App is targeting people in very vulnerable situations and surroundings, which very often have no or very little internet access and not the latest smartphone technology. It is however changing, therefore the solution should take this into account and offer services under these circumstances and already be the base for the future.
* **Content:**
  + Basics of Hydroponics: Description/Benefits
  + Hydroponic Manual (Use developed e-guide (from Phase I) as base)
    - Adding Video Material to Easy Step Guide + Building Instructions and where useful
    - Covering:
      * Easy Steps and explanations of each phase of the cultivation process (starting with the seedlings)
      * Variations of cultivation techniques: floating bed, in substrate, NFT or other variations
      * Materials:
        + Explanation of materials needed (including info on mineral nutrients, PH testers, insect repellent etc.)
        + How to create/build material alternatives: including instruction of building wooden containers for example, Tube-systems etc.
        + Nutrients/Fertilizer: how to mix it…
      * Table of Cultivations: what crops can be cultivated/what are the timings and specifications/which nutrient solution is needed
      * Cultivation Calendar
  + Materials:
    - Overview: what do you need (also including Nutrients, Seeds etc.)
    - Access Database: Materials supplier’s database that will be managed by HydroApp administrator, who will be able to add new suppliers, edit and delete records in the suppliers table.
  + Marketing/Sales Section (modules):
    - Biz Basics on selling hydroponic products (including advantages/selling arguments)
    - Marketing subsystem that will enable HydroApp user to create and edit marketing profile (including contact phone, e-mail, address), register and edit/delete Inventory. Inventory will be moderated by HydroApp moderator. Inventory of particular user will be visible to other users of HydroApp.
  + Hydroponics to eat:
    - Benefits: Impact on nutritional balance/on individual consumption: improved nutrition through availability of fresh vegetable (insights from the nutritionist)
    - Recipes: what to create/cook with hydroponic products (possibly creation together with Cooking School Cordon Bleu & beneficiaries from Ventanilla)
    - Recipes and experience sharing subsystem that will enable users to create/edit/delete recipes on how to create/cook with hydroponic products and notes describing experience of growing particular crops. HydroApp users will be able to comment recipes and notes. HydroApp moderator will have instruments to review and moderate recipes, notes, and comments.
  + Expert Section:
    - Interactive section to ask questions on Hydroponics and actual problems (“I have bugs on my plants”, “leaves turn brown, why?”….)
    - Q&A part – hydroponic dictionary: database of expert knowledge, frequently asked questions, could also be interactive and grow
    - Expert section where any HydroApp user will be able to ask question on hydroponics and get answers from experts.