

## Partner Program 2011



### Mission

We think that shipping containers are a great invention, a rare example of standardization that spread all over the world. China has become the world's manufacturing department and literally everything comes to your country in a shipping container. Millions of these steel freight boxes, all the same size, travel the globe, every day of the year. In the summer of 2002 we happened to discuss on a birthday party the shortage of student homes in Amsterdam. Standing in a sunny garden and enjoying cool drinks, we realized that the main obstacle were the high construction cost versus the low rent that students can afford for these homes. "Why don't we prefab them in old shipping containers? That could make a great home with big windows, you can even stack them 5 high at least! How expensive can that be?"

Was that a realistic idea?



It certainly was! It took us 3 years for the detailed engineering and endless meetings to convince city officials and universities...but look at the result!

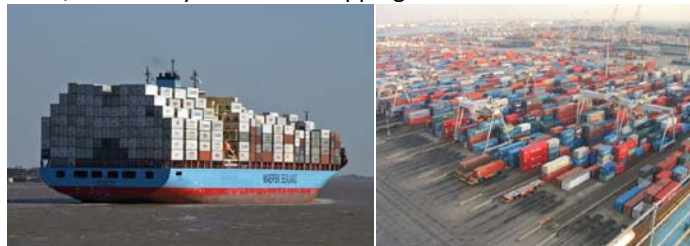


These are a few prototypes that we showed to the public to see a container home for the first time! A lesson learned: you need to have a prototype to show...only when your customer has visited a container home inside, he is convinced...the image of the outside is not enough.

### 1. About containers...

In the early 1960's a trucker by the name of Malcolm Mclean waited in his truck in the port of New Jersey many hours before all the bales of cotton were one by one unloaded from this truck and lifted into the hold of a ship, to take the cargo to another part of the world. Many hours wasted, damage to cargo and even risk of theft during loading and unloading. He came up with the idea of a standardized closed metal box (holding all the cargo), as big as would fit on the back of this truck, that could be lifted in a couple of minutes in the hold of the ship. It took many years for this invention to be accepted but nowadays this standard metal freight box has found his way to literally every city in the world.

Going through various changes, the overall adopted standard is now a 8 feet (2,4 m.) wide box, 20 or 40 ft long (6 or 12 m.) and 8,6 or 9,6 ft high (2,6 or 2,9 m.). No matter which port you look or on which highway or railroad track you would look, no doubt you will see shipping containers of these sizes.



To call a steel freight box a 'shipping container' it has to meet the very high international standards as set out in ISO regulations. This is what makes shipping containers very solid boxes, to protect valuable cargo and to be able to withstand forces from high stacking, stormy weather and rough handling in ports and logistical centers and that for many years (most shipping lines use their containers at least 15 years before replacing them).

We think that traditional construction companies use often outdated working processes, are not very fast and are certainly not very cheap. The average construction project leaves you with a perception of chaos, high chance of failure and little grip on the progress. This can be done better and so we introduce a simple home box, we adopt what the international freight container guys already did for us (standardization) and so we came up with the container home. Is that so new? No, but we are the first to take this a professional level, manufacturing at high volumes and meeting normal building standards, while being much cheaper than traditional construction companies. And it works! Ask all the happy students that live now for many years in this large container village in Amsterdam.

And keep this in mind: there are more people on this planet without a safe and a proper home than people with one. With affordable and simple homes, there is a market potential with no boundaries.



## 2. Can you actually live in a shipping container?

Shipping containers are great to carry and handle cargo over large distances safely and in a very efficient way, but they were never meant to live in, to be a safe and cosy home.

This is where we come in: we have designed and engineered a package of changes to transform an existing shipping container - or a purpose built new one from China - into a proper home. But when is such a box suitable as a "home" (or hotel room)? So many cultures, so many opinions. But to mention a few basics:

- Enough structural stability for storm conditions that we expect from every building (remember that standard shipping containers do not meet these stability standards)
- Enough daylight access (there are minimum standards in building regulations) from windows and doors.
- Insulated from sound transmission from the environment or other parts of the building.
- Insulated to prevent outside cold or heat being transmitted through walls, ceiling and floor into the interior, where an ambient temperature of 21<sup>o</sup> Celsius is required (energy performance).
- Adequate protection from fire coming from outside to inside or from inside going to the next floor.
- Well ventilated to create a healthy indoor environment.
- A safe wiring schedule, with safety breakers and a convenient set of wall sockets and switches and lights.
- The (optional) availability of a bathroom and a kitchen.
- Sustainable use of materials: we all have the responsibility to be environmentally conscious.

## 3. Profile

With the above in mind, Tempohousing designs, manufactures and builds housing and hotel projects based on their in-house developed prefab housing ISO container system.

The advantages of modular system are flexibility, high speed of construction, standard global transportation, low cost, easy to relocate and adaptable to any architectural design.

The modules are designed for all climates and for all regions in the world. The use of high quality steel and a well engineered steel frame ensure a long durability and the option to stack the units 5 high or more.

Some models of the prefabricated units can be found on our website, as well as example building and list of projects, finished or in progress.

We stick to the global ISO standard of 8 ft (2,4 mtr) wide units (also available at special request: 12 ft (3,6 mtr) wide) and 40 or 45 ft long, so our units are ready for standard logistic equipment worldwide (cranes, trucks, ships and trains). Connecting to of these units offer spaces of 16 x 40 = 640 ft or 60 square meter.

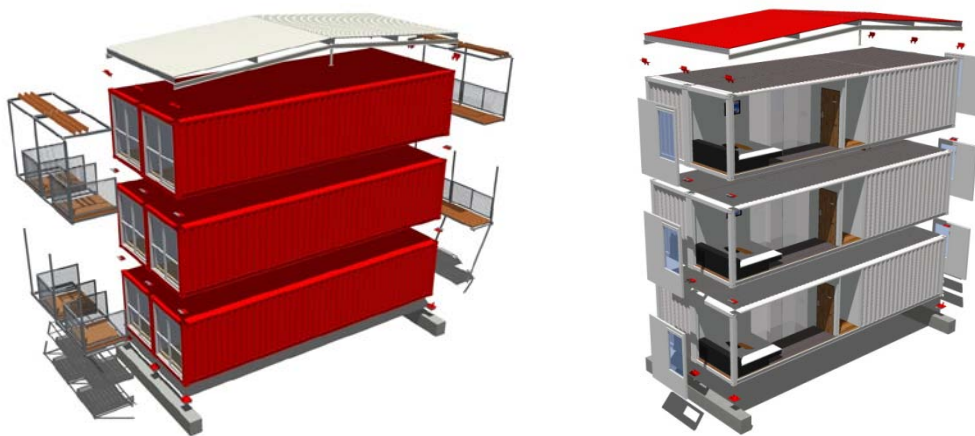
The standard sizes have many advantages but most important is the significant reduction of cost during construction and manufacturing. Also the value when using the modules in a “second life” is much better, as they can be resold all over the world.

The standard modules touch on WHY we set up this company: we strongly believe that construction homes should be made much easier, much cheaper and much faster.

The answer lies in prefabrication and the use of standard modules. And when these modules make use of a global standard (the ISO sizes of shipping containers) that has successfully changed the global economy in the past decades, it is a good decision to adopt that standard. And yes, a 8 foot wide shipping container is rather narrow to live in but still this unit offers enough space to be happy, just ask all the students in Amsterdam who live in one. For other applications, we offer 2 connected containers, for example for hotel rooms.

These standard ISO sizes do not mean that we are not looking at complimentary solutions, such as collapsible units, special width units (10 – 12 ft wide) or units with a special concrete floor. However, it is unlikely that the width of 8 ft for intermodal freight containers will change in the future: too much investments have been made in infrastructures in the logistic chain to change this. For us a sign to stick to this standard.

In the past years, we have been most successful in student housing, hotels and staff accommodation. Although other applications should not be overlooked, in these areas our construction systems seems most appropriate. The approach of modularity is not only used during design and manufacturing, but also in the design of the entire building. Almost all projects need besides the ready-to-use modules also access systems (staircases, elevators, walkways or galleries), a roof, a façade system, connectors, balconies and connections to the power supply, the sewage system and the water provision. All these components can be prefabricated also and shipped together with the modules. The exploded view image below shows the principle.



#### 4. New or used containers?

The manufacturing today of new ISO shipping containers is almost completely in the hands of Chinese companies. When Tempohousing builds homes based on new containers, this production including all interior parts, takes place in China. The advantage is the low labour cost and the use of brand new steel structures but the disadvantage is the cost of transport. It can be very attractive to modify existing older shipping containers that are already available in your country. Please check the project “Labourhotel Diemen” on our website to see what kind of building we made out of old containers. We did not even bother to paint them, since a complete new (blue insulated sandwich panels) façade was installed against the old containers. The result was a new looking building and offering additional insulation, very good for reducing heating cost.



In areas where labour cost is not too high and used containers and other necessary construction materials are easy to purchase at good prices, it can be a good choice to do the complete project on site, same as we did in the pictures above. But keep in mind: it makes the project twice as complicated. To make a building out of individually delivered prefab modules is not an easy task with all the details to completely finish the project. And on top of that you need to set up a structure to modify the shipping containers into ready-to-use homes, preferably in a controlled environment (production hall) for maximum quality control.

### 5. Local production

As we mentioned before, the main flow of shipping containers goes from the Far East to the western countries and in a much smaller quantity in the other direction. This leads in many countries to a so-called imbalance: more containers with cargo come than go out again. Result: a good supply of used containers, often at a good price. This gives an opportunity to modify these used boxes locally. We have supported the set up of a factory in Amsterdam, which was a great experience. Unfortunately the owner decided to stop the experiment after 2 years but it proved to be a very good exercise. The staff consisted of unemployed youngsters who could 'learn on the job' with the help of retired but very skillful managers. From a social point of view a great project but it also helped us to engineer in detail how to improve modifying an old container to a comfortable home.

### 6. The Tempohousing Academy

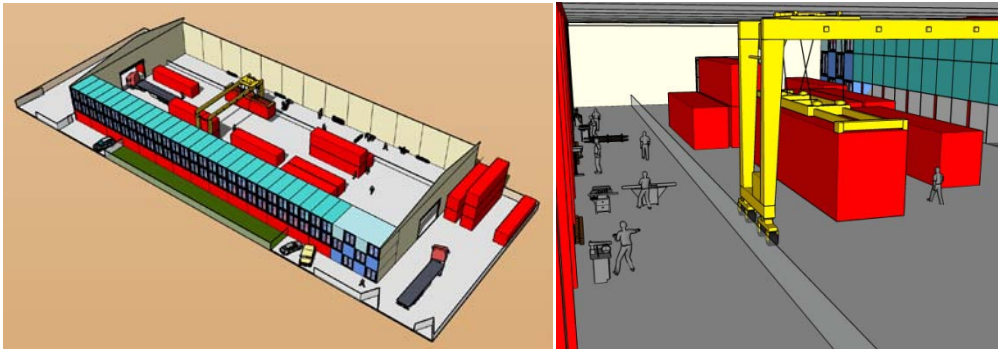
We believe strongly in the concept of local production of modular homes based on used shipping containers that are available locally. It is a very sustainable use of resources: use the existing supply of containers to turn them into much needed homes for families, students, workers and other groups that need shelter. But all big cities often have this other social issues: young drop outs with no jobs and no proper education. If a government or company invests in new housing programs anyway, why not in combination with a local factory that offers a 'work-and-learn' program for the unemployed?



*Don't be confused by the artistic approach of the photographer! This is a picture of the production location ('social factory') in Amsterdam.*

This is what we call the Tempohousing Academy. It is a factory where new jobs are created and new skills can be learned and where homes are manufactured that fulfill a great need. The factory could even be made of containers: we designed one for Abu Dhabi some years ago. The "walls" of the factory were made of

containers also and contained small apartments that the workers from far away villages could use during the week. Unique about this concept is its flexibility – the factory can be relocated to a new location when necessary.



### 7. Think global, act local

Tempohousing Global is based in Amsterdam, The Netherlands but we are in contact with virtually every country in the world. This is the result of adopting a global (ISO) standard and speaking a language that we all master: English.

We have a good reason to “think global” with our product: the demand for proper housing is a demand “forever”. The number of people and families that do not have a good home, be it in modern cities in Europe or developing areas like South America or in post war countries like Iraq or Sudan is beyond imagination. What we also register is a huge demand for affordable hotel rooms for most areas. There is no doubt also in your area a market – and maybe: a HUGE market – for affordable homes and hotels.

### Is selling modular homes very easy?

No, it is not. A lot of people are directly attracted by the fact that we may be cheaper, faster and easier than traditional construction methods like concrete and bricks and mortar, but there are more conditions to consider:

- 1) The construction industry is in most countries a conservative sector: changing to new methods is not easily accepted. “we have always built homes from wood / concrete / bricks and mortar, why should we change to something else?”
- 2) “Steel frame homes are too hot inside, or too cold, or too noisy, too small, they do not last very long and they are ugly”. You know these are all untrue statements but this perception is not easy to fight. Our modular building meet all codes and are as good as any traditional building but it takes time and a lot of effort to convince your stakeholders of this.
- 3) To build something you need land and for the building permit you need zoning permission which is a political process. And these process can take many years. Patience is important.
- 4) Modular homes are in most cases only accepted for social housing. This type of housing requires government funds and political support. Again two factors that take time and effort to convince. Social housing and student housing are not easy to finance as the rental income is much more modest than other more expensive types of housing.
- 5) Working with standards sizes has many advantages but it limits the architect’s bright ideas or the use on odd size plots of land. Also we are not strong in large spaces like class rooms or supermarkets, nor do we like to go higher than 7 stories: it can be done of course we have learned that this is the tipping point where other construction methods are more efficient and where the modular system of Tempohousing loses its advantages.

What we mentioned above are just a few of the obstacles we have come across in the past years. Do not be disappointed, we still have a great concept with a great potential and much flexibility, but it is important to consider that entering a market with modular homes has many challenges.

#### **8. A shipment of modified containers is not a complete building**

This may sound like kicking in an open door, but we have learned that many interested parties underestimate the entire process from ordering prefabricated units until commissioning the complete building. A complete design process is necessary for a number of reasons, for example:

- The modules individually and the building as a whole have a lot of interaction, they can not be seen as 2 separate things: it makes life easier that the modules arrive “plug-and-play” but it is the finished and complete building that counts;
- You will always need a well designed foundation, access to the modules (staircases, galleries, elevators), an additional roof that handles excess heat / cold, rainwater, strong winds, the ventilation outlets, connections to the public facilities like water, sewage, power and data / tv connections.
- In most cases you also need to take care of the space around the building for parking, fences, green area, roads and lights.

The design process of the complete project that meets all the demands of the local community and the technical specifications for submitting a building permit is a much more complicated and detailed process that should not be underestimated.

#### **9. It is more comfortable to do business face to face**

Developing projects and selling homes can take months or years. It is therefore for local customers and governments easier for them to do business with local offices, rather than through long distance calls, endless emails and communication with other time zones when contacting the head office in Holland. This is why we prefer to have local teams to market the Tempohousing system. Local teams have also a head start in identifying the best opportunities in a market, they are better positioned to define the best price – production combination and they know on which doors to knock for support and funding and building and zoning permission.

Building standards vary from country to country: we can not keep a list of requirements for every area (and these requirements also change frequently). It has to be the local office that can work with local architects and governments and experts to tell us what for example the local fire rating is in your area: you need walls with a minimum of 30 minutes fire protection or 60 or 120 minutes? Sometimes the regulations are laid down books the size of 3 telephone directories, no easy stuff to quickly go through...a job for experts!

#### **One team, one product, one brand !**

In order to make best use of the marketing efforts in the past, we feel that it is important to use the brand name Tempohousing in all areas. We are identified by many as pioneers in this industry and this value helps customers to quickly gain trust in our products and services. Where we can improve however is how our worldwide presence is currently set up. In the past we appointed distributors on a contractual basis and they could order directly all products and designs from us. We feel that an ‘equal partner approach’ works better. Based on a number of round table discussions in 2010, we have decided to drastically change this distributor policy. The stronger the team that is behind the brand, the better we can serve all markets. So if you share our passion for modular homes based on ISO container standards and you feel that in your area there is a good demand for this product, become a member of our team!

## 10. Building a strong team

In doing business in today's market, it is all about trust. Trust is like a solid foundation for a building. If there is no trust, there is no stability (at least not in the long run). Result for a building on a weak foundation: doors and windows will crack and break, no durability. In doing business this is not different: communication suffers, we fail to understand each other very well and goals are not achieved.

All trust is based on respect and transparency. And this is exactly the structure we want to use to build the new Tempohousing team. How to reach this:

- a. Team members ( read: country organizations) should become co-owners of the Tempohousing brand and should deal directly with all suppliers. Your (local) company will become owner of the Tempohousing brand in your area and this cannot be terminated<sup>1</sup>
- b. All information is made accessible for all team members. We are at this moment building a database with all drawings, details, pictures, brochures, documents, project details, financial models and price information, contacts (customers, suppliers) and all team members can access all information 24 hours a day. The database is a web-based application and can be used with Microsoft Internet Explorer (or similar) from any location with internet access.
- c. Team members will also upload new information to the central database for the benefit of other country organizations.
- d. All known suppliers (manufacturers, parts, transport, consultancy, architects) are entered with all details in the central database and are made accessible for all team members.



We maximize the transparency by sharing all available information. The traditional 'hide-and-see' concerning cost price, margins, hidden additional fee's is yesterday's way of doing business. We all understand and accept that everybody needs to make adequate profits to survive. Why not open the books so everybody can feel comfortable with what is happening.

If we are able to include the customer in our team efforts and we make the ultimate financial, commercial and technical success of the project *everybody's* interest, the total price will always be better (read: lower) than when all parties in the chain or the construction process choose their own targets, only mind their own profit targets without minding the team and the collective result and effort.

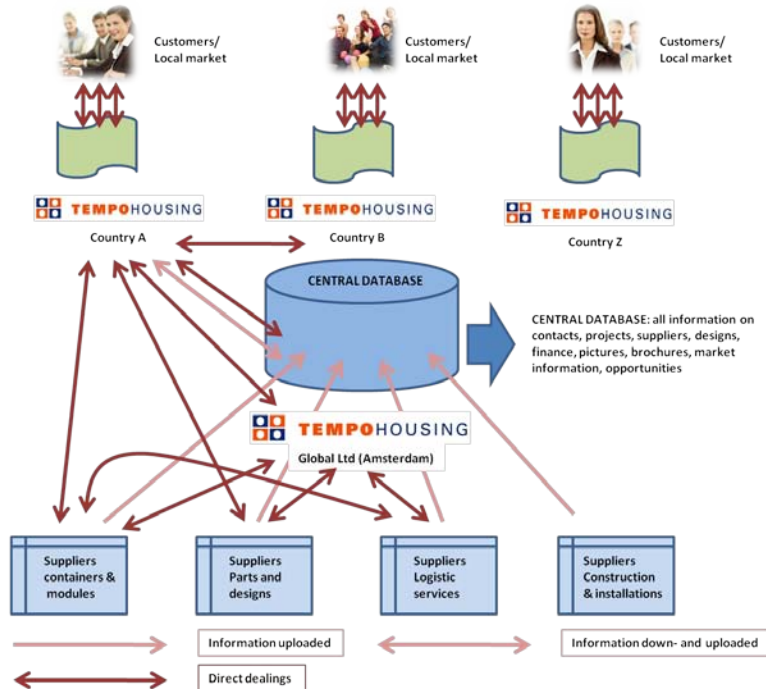
The access to all information plays an essential role: it is a web based application, accessible with standard software such as Internet Explorer. The more information all members of the team supply, the more valuable the data will be.

Our service to customers and markets will be unbeatable if we can possess and can provide information for projects from A to Z: technical data, reference projects, example designs, alternatives in different climate

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<sup>1</sup> Unless a country organization does not respect their franchise obligations in a way that causes damage to other country organizations or Tempohousing Global.

zones, financial data for construction and for running projects and so on. In the picture below it shows how “country A” will operate in this structure when they are a Tempohousing Partner in the project. They will use information and will directly contact customers, fellow team members, Tempohousing Global and the various suppliers, necessary for their projects. “Country A” is an example of a Tempohousing Partner, a co-owner of the brand, a colleague



The roles and responsibilities of Tempohousing Global:

- Develop, launch and maintain the database and add all available information to start with;
- Roll out a marketing program and develop new products;
- Fully support all team members with their marketing, projects and technical queries with design services, construction supervision services and other expertise support.
- Actively seek new team members to strengthen the brand and the team;
- Develop projects in markets where no Tempohousing Partners are available yet
- Actively facilitate and support Tempohousing Partners

### 11. Cost and benefits

If you and your company become a partner in our team and you are going to operate under a local Tempohousing brand, a big window of opportunities will open up for you. The demand for housing (temporary, transitional or permanent) is one of all times and place, no matter where you look. The same goes for the development of hotels, there is a demand everywhere. We invested significantly in our concept and product over the past years and you will greatly benefit from this.

To enter the Partner Program, it is necessary to set up a local company that will operate under the name of Tempohousing <your country> name. Tempohousing will enter this joint venture with a stake of 10%. This new company will pay a modest one-time contribution or franchise fee to Tempohousing for the use of all Tempohousing materials (technical and marketing) and infrastructure and its brand name. Also a small monthly franchise fee is required and a royalty fee over all modular homes and hotel rooms sold in the local market. There is no time limit to this venture, once you are a partner, Tempohousing cannot terminate the agreement (unless there is a breach of contract of course). The new local company will have full support from the central

Tempohousing office in Amsterdam and full access to all technical information and contact details of all suppliers. Through our website we receive a lot of inquiries based on our worldwide reputation and these commercial leads will be forwarded to you directly.

The greatest benefit is that you get to order directly from our suppliers and factories, since as a partner you do not have to order through Tempohousing so you pay the factory prices and no additional profit to us. Of course we will be available for all the support you need, both in designing and manufacturing and quality control and we will make available all our experience to make your local company a great success.



*Price negotiations: visit to a Chinese factory near Hong Kong*

What is demonstrated in the example above, is that you actually get the best of both worlds: you will be able to deal direct with the (Chinese or other) factories, but you do not pay our premium but we are still as team member available to support you. This investment on our side will help us building a global structure that eventually is for us a more valuable mission than the “quick buck” of a first deal.



*Visit to a Chinese container factory in the North of China*

### **Are you interested in becoming a Partner in the Tempohousing network?**

These are some of the things a Partner can expect from Tempohousing:

1. A popular product range of prefabricated high quality housing units, suitable for many different uses in many markets in all countries
2. The 24 hour per day use of an extensive database with technical, marketing, financial and contacts information of suppliers around the world.
3. Referrals through existing channels, our website and our contact network world wide.
4. High volume manufacturing capability in different countries.
5. A tested concept for containerized housing on heating, cooling, ventilation, sound insulation, fire resistance, humidity and structural integrity.

6. A “proof of concept” reference list of successful projects in different countries
7. An experienced team of designers and engineers dedicated to prefab housing
8. Calculation and budget examples for housing or hotel projects
9. Supervisors to support your customers on the construction site
10. Marketing support with brochures, pictures, movies, press articles, TV programmes and internet
11. A well known name around the world and a strong branding in high quality prefab housing.
12. Exclusive rights to operate in your defined area and the exclusivity is not related to sales performance or limited in time.

These 12 points mean that you can enter your market(s) with a convincing product at a competitive price with strong support. But with all that we have to offer you, we also expect a lot from a Partner:

- Strong expertise and understanding of their local market for the opportunities for prefab housing, both commercially and technically.
- A solid market position in their market, based on their current company activities and products (could be architecture, construction, real estate development or related)
- Commercial staff available to market the products and technical staff available to translate the customer requests and the local building regulations into modifications of Tempohousing products for their specific markets
- Access to decision makers on political levels where housing issues are decided upon
- Access to investment companies and banks to fund the housing projects.
- A strong understanding of technical and legal and code requirements for housing in their specific market(s)
- Prepared to invest in a pilot project in their market with the Tempohousing product.

### 12. Contact us now!

If the above is of interest for you, contact our office. To start a discussion, we would like to receive your business plans, which includes in which market segments you think you can sell best, what pricing strategy you have in mind and what technical modification are necessary for your market.

**We look forward to hear from you!**



*Handover of the first 60 front door keys in the Keetwonen project by Quinten de Gooijer in 2005 to the customer (left in the picture). This project was labeled as temporary at the time but the customer decided to extend the use of the units to 2016 or 2021.*