intelligence means. However, it will be appreciated that these examples are given for example only and are not limiting.

It will further be appreciated that individual containers may be provided with one service, a selection of services or all services described. Furthermore, the services listed should not be regarded as limiting. Any form of service that is capable of being carried or transmitted to a bin 10 may be envisaged.

Furthermore, although the embodiments of the invention described above, and shown in the Figures, detail systems in which the containers 10 are all of a substantially identical size and shape, it will be appreciated that this need not be the case. As described in UK Patent Application No. GB1506364.7 filed 15th April 2015, incorporated herein by reference, it will be appreciated that such a system may be configured to handle containers 10 of multiple sizes by use of load handling devices 30 of differing sizes capable of lifting and moving containers 10 of multiple sizes.

Moreover, the embodiments described above and detailed in the accompanying figures assume that the storage system comprises containers 10 in stacks 12 disposed within a framework 14 in an unfettered manner. It will be appreciated that the system may be partitioned by suitable partitioning means into smaller sub sections defined by, for example temperature. In this way it would be possible to have an ambient portion, a chilled portion and a frozen portion for example. It will also be appreciated that the partitioning may have additional advantages, for example, partitioning enables sections of the storage system to be isolated from other sections. This may be necessary if there is a fire, for example, and fire suppressant means are used in a given area to extinguish the fire. Furthermore, in the case where the system is used for alternative uses, there may be advantages in having different gaseous atmospheres in different portions of the system. This may be achieved by partitioning the system. It will be appreciated that the partitioning means may be temporary and remotely deployable, for example roller shutters disposed under the grid.

It will be appreciated that any number of containers within the stack of containers may comprise the same or similar living organisms or crops. Furthermore each container within the entire storage system may comprise different crops or living organisms. In one embodiment, each container within the entire storage system may comprise at least one living organism comprising one or more of leafy greens, or microgreens, or soft fruit, or tomatoes, or woody herbs, or root vegetable, or fungi, or protein or insects. In such a way,

the growing system may be used for parallel experimentation in which each growth chamber comprises variable but predetermined growing parameters.

It will further be appreciated that, as described above, the or each container may comprise sensor means for detecting the environment within the or each container. Furthermore, said environment within the container or growing chamber may be monitored by said sensor means, the data generated by the sensor means being monitored and logged and enabling the growing system operator to remove or replace the living organisms according to a predetermined set of parameters.

It will further be appreciated that the service area of the growing system may abut or be located adjacent a storage system as described above with reference to other embodiments. In this particular embodiment, load handling devices of the types previously described may be used to transfer containers, growing trays or any other container located within the system between said growing system and said storage system. One form of detachable mechanism is described in WO 2016/166294 A1 (Ocado) and hereinbefore incorporated by reference.

Many variations and modifications not explicitly described above are also possible without departing from the scope of the invention as defined in the appended claims.

CLAIMS

1. A growing system for sustaining and/or nurturing the growth of at least one living organism comprising:

a plurality of containers (10) arranged in one or more self-supporting stacks (12)~~, the system further comprising~~;

at least one load handling device (30) disposed, and arranged to move laterally, above the stacks ~~arranged to move laterally above the stacks (12), the or each load handling device (30)~~ and comprising a lifting device arranged to lift at least one container (10), or part thereof, from a given stack (12) of the one or more self-supporting stacks;

each container comprising:

a growth chamber (100)~~, the growth chamber comprising~~ having therein a series of shelves (120) acting as supports for at least one growth tray (110)~~, the growth tray~~ comprising a growing medium to sustain~~ing~~ growth of the at least one living organism~~, said container further comprising~~;

service means (160, 170) ~~for sustaining and/or nurturing the growth of the or each living organism~~ for providing services to the container; and

a door (130) which, when closed, substantially seals the growth chamber and, when open, provides access to the series of shelves,

wherein a target container located in the given stack ~~may~~ is able to be lifted by a load handling device (30) and transported to a service area, said service area comprising means for performing tasks on the at least one living organism~~s~~ therein.

2. A growing system according to claim 1 in which the service area comprises means for removing the, or each, growth tray outwith the container.

3. A growing system according to claim 1 or 2 in which the service area further comprises means for performing at least one action on said at least one living organism~~s~~.

4. A growing system according to claim 3 in which the action comprises at least one of harvesting, or pruning, or de-leafing, or pollenating, or transplanting, or feeding said at least one living organism~~s~~.

5. A growing system according to any preceding claim in which the at least one living organism~~s~~ comprise~~s~~ one or more of leafy greens, or microgreens, or soft fruit, or tomatoes, or woody herbs, or root vegetables, or fungi or protein, or insects.

6. A growing system according to any preceding claim in which the, or each, container comprises a plurality of growth ~~chambers~~ trays.

7. A growing system according to any preceding claim in which the service means comprises means for providing to the container one or more of water, ~~or~~ nutrients, ~~or~~ air or other gaseous fluid input, ~~or nutrients, or~~ disinfecting means, ~~or~~ light, ~~and~~ or any other environmental service required for a predetermined living organism.

8. A growing~~th~~ system according to any preceding claim wherein the service means ~~is light provided via~~comprises one or more of a light-guide~~,~~ or a light-tube for providing light to the container.

9. A growing system according to any preceding claim in which the service area comprises removal means for removing the, or each, growth tray, the removal means ~~for removing the growth tray~~ comprising conveyor means (135), fork lift truck means, or any other suitable means capable of removing said growth tray from said container.

10. A growing~~th~~ system according to claim ~~8~~9, wherein the removal means ~~for removing the or each growth tray~~ is height adjustable.

11. A growing~~th~~ system according to any preceding claim wherein the at least one growth tray~~s~~ (110) ~~are~~ is arranged on a support structure (120) within the growth chamber (100).

12. A growing~~th~~ system according to claim ~~10~~11, wherein the system further comprises a releasable mechanism for holding the at least one growth tray~~s~~ (110) in place.

13. A method of growing at least one plant~~s~~ or living organism~~s~~ in a growing system according to~~ance with~~ any preceding claim, wherein a target container is lifted from a stack of containers by a load handling device and the target container is transported to a service area where the at least one plant or living organism is accessible for performing actions thereon.