

## *VERMAS Work Session*

### **UN/CEFACT 27<sup>th</sup> Forum**

**“Mini-Conference on electronic maritime safety regulatory information exchange standards”**

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## In this presentation

- New SOLAS amendment and IMO guidelines
- Business requirements – Shipper, Forwarder, Carrier, Terminal
- Existing Edifact messages
- New VERMAS message: Use cases
- New message: Final structure, data elements
- Time line – Next steps

## What is SOLAS?



The **SOLAS Convention** (Safety of Life at Sea) is maintained by the IMO (International Maritime Organization) as a UN agency.

It is an **UN international treaty** concerning the safety of merchant ships. SOLAS has been in place for many decades and is well known at carriers, terminals and ports.

The SOLAS Convention has been ratified by 162 contracting states. SOLAS represents **99% of the tonnage of the global merchant fleet**.

It applies to ships flying the flag of a SOLAS country.

The SOLAS Convention is **Binding International Law**.

The SOLAS amendment requires in chapter VI, part A, regulation 2 that packed containers' gross mass are verified prior to stowage aboard ship.

With the **VGM Verified Gross Mass** regulation, SOLAS for the first time reaches out to the **shipper of a container**. Effective date is 1<sup>st</sup> July 2016.

## Why is the new SOLAS regulation needed?

For many containers, too many, the actual gross weight is higher than the declared gross weight. The problems resulting from mis-declared container weights include the following:

- Damage to ships and terminal equipment
- Stability risks for ships
- Risk of personal injury to seafarers and shoreside workers
- Collapsed container stacks
- Containers lost overboard (both those overweight and containers that were not overweight)



## Why is the new SOLAS regulation needed? Example MSC NAPOLI in 2007

A major incident at sea caused by many overweight containers.

This was the actual starting point for discussing stricter rules on container weight declaration.





## Why is the new SOLAS regulation needed? Example MSC NAPOLI in 2007

### **Weight Difference Problem - Container Overload – E.D.I. to approach SOLAS**



We remember as MSC, a BIG SHIP DISASTER...

Jan 17° 2007...

...on ENGLISH CHANNEL (named in Italian «La Manica»)...

...MSC NAPOLI had a BIG PROBLEM with Weather...

...On Jan 18°, she began to break hull.

“...around 660 containers stowed on deck, which had remained dry, were also weighed. Of these containers, 137 of them (that is, around 20%) weighed at least 3 tons more than their declared weight.

The largest difference was 20 tons, and the total weight of the 137 containers was 312 tons heavier than on the cargo manifest, according to the report into the investigation of the structural failure of the vessel by the UK Marine Accident Investigation Branch (MAIB)”

## Why is the new SOLAS regulation needed? Example HUSKY RACER

Hansestadt Bremisches Hafenamt



### Stability incident at Bremerhaven

- container feeder HUSKY RACER at Bremerhaven on 2 Oct. 2009
- containers on deck had been unlashed upon arrival
- discharge started from holds upon ships request (repair intended)
- the consequence was a reduced stability
- heavy rolling of the ship occurred,  
when discharge from deck in outside position started
- 26 containers toppled, 18 containers were lost overboard

Why is the new SOLAS regulation needed? Example HUSKY RACER

Hansestadt Bremlisches Hafenamt





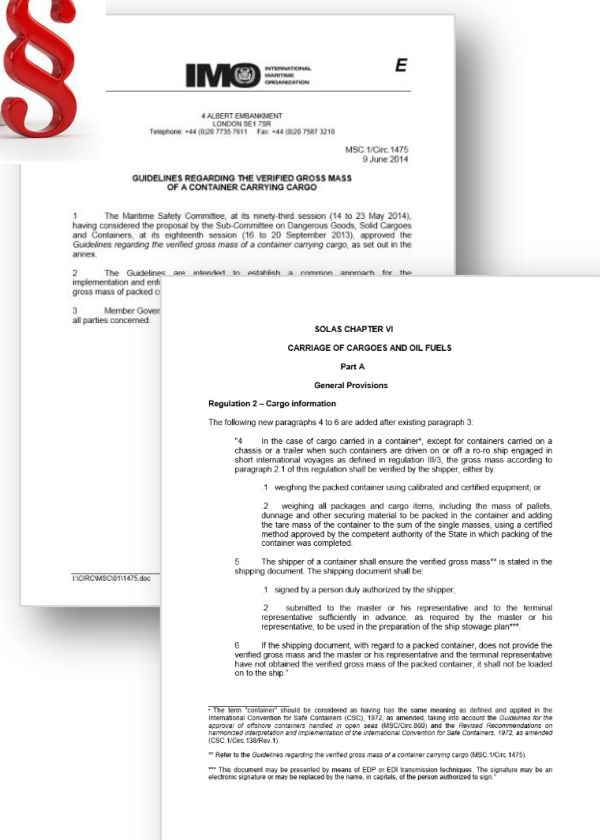
## Why is the new SOLAS regulation needed? Example single overweight container

Smaller incidents with overweight containers happen too often in daily port operations work around the world. Each incident puts human life at danger and disrupts the supply chain.



## Is the SOLAS VGM regulation valid without National Legislation?

1. The SOLAS Convention is **Binding International Law** in each of the 162 signatory states, even **without national legislation**.
2. The VGM reporting requirements are clearly described in the IMO guidelines MSC.1/Circ.1475 and must be followed. The typical flow is: **Shipper → Carrier → Terminal**. Carrier and Terminal have a joint responsibility to ensure that a container without VGM is not loaded.
3. A **national legislation** would clarify the following items:
  - How can the shipper become certified for method 2?
  - Which is the competent authority for that certification?
  - Which weight tolerance is allowed by the authority in case of re-weighing?
  - What happens in case of violation?
4. The legislation will **not clarify the time** or deadline when the VGM must be reported. This has to be an operational agreement with the carrier.



Additional information can be found on:

<http://www.worldshipping.org/industry-issues/safety/cargo-weight>

## Requirements and consequences of the IMO Guidelines on VGM

1. The **Shipper on the ocean carrier's B/L is responsible** for providing a Verified Gross Mass (VGM) for each full container.  
He may decide between two methods: 1) to weigh the packed container or 2) to add the weight of all cargo items plus the weight of the packing material plus the tare weight of the container.
2. The VGM can only be determined for a completely **packed container**.
3. The shipper may **delegate** the actual procedure of obtaining the VGM to a **3<sup>rd</sup> party**, for example a forwarder or a weighing facility. This does not release the shipper from his responsibility according to 1 above.
4. The **carrier and the terminal have a joint responsibility** to ensure that a packed container **is not loaded** on a SOLAS ocean vessel if there is no VGM available.
5. The **vessel command** must not accept a packed container on board until they have been informed about its VGM.
6. The VGM is part of shipping documents. Besides the weight itself, the **name of the person duly authorized by the Shipper** must be transmitted to the carrier.
7. A container status may change from "VGM not available" to "VGM available".  
An existing VGM may be revised by means of EDI messages.
8. EDI messages must be able to distinguish "VGM" and "gross mass without verification".
9. The typical reporting chains is: Shipper → Carrier → Terminal → Vessel  
but different variants are possible.

## What is required from the Shipper?

1. The requirements are laid down in the **IMO guidelines** . They become effective on **1<sup>st</sup> July 2016**
2. The **Shipper is responsible** for providing a Verified Gross Mass (**VGM**) for each full container. He may decide between **two methods**: 1) to weigh the packed container or 2) to add the weight of all cargo items plus the weight of the packing material plus the tare weight of the container.
3. The VGM is part of **shipping documents**. In a paper world, it would be **signed** by a person duly authorized by the Shipper. In our electronic world it is sufficient to transmit the full name of the **authorized person in capital letters** replacing the signature.
4. The VGM document must be provided to the carrier and to the terminal **in time to be used for the ship stowage planning**.
5. **No VGM – No Load.**

## How to meet the container weight mandate

### As a shipper, what are your options?

#### METHOD 1

Take a loaded container over a **weighbridge**, subtract the weight of the truck, chassis, and fuel to get the weight of the packed container.



Scales must be certified and calibrated in line with the national standards of the country where the weighing occurred and Method 2 is subject to national certification and approval.

#### METHOD 2

Weigh each item – including its packaging, palleting, dunnage and other packing and securing materials – going into the box.

Add that sum to the weight of the container to find the weight of the packed container.



### What are you required to do?

Provide a document signed by the shipper to the shipping line and terminal declaring that the **shipper verified** the weight and that it was weighed properly.



The SOLAS amendment will be enforced by the coast guard or other agency responsible for SOLAS regulations in a given country and punishments for violations will vary by country.

### What happens in the case of noncompliance?

There are all kind of possibilities for what could happen to the box that failed to provide the certified weight document but none are settled.

Terminals may choose to hold a container or send it back, but whatever happens, the ship will leave and the container will not.

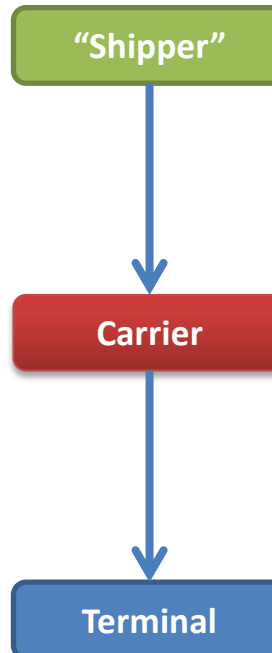


## Who will report the VGM to the carrier?

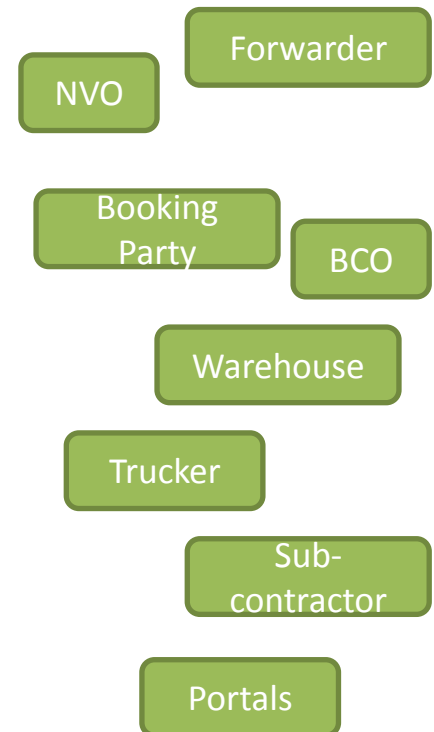
1. The **shipper on the ocean carrier's bill of lading** is the responsible party to provide the VGM to the carrier. He can delegate the actual reporting, but he has to ensure that the process works.
2. A **person duly authorized by the shipper** must sign the (electronic) document. This person can belong to **another company** than the shipper, for example to a forwarder or a weighing station.
3. The carrier will **accept the VGM from a 3<sup>rd</sup> party** if they are authorized by the shipper. The carrier cannot check that authorization chain. The 3<sup>rd</sup> party must **report at minimum** 1) The name of the Shipper on whose behalf they are acting, 2) Their own identity, 3) The full name of the authorized person, 4) The carrier's booking number, 5) The container number and the VGM.

*(please reconfirm with your carrier)*

*The happy flow*



*The real world*





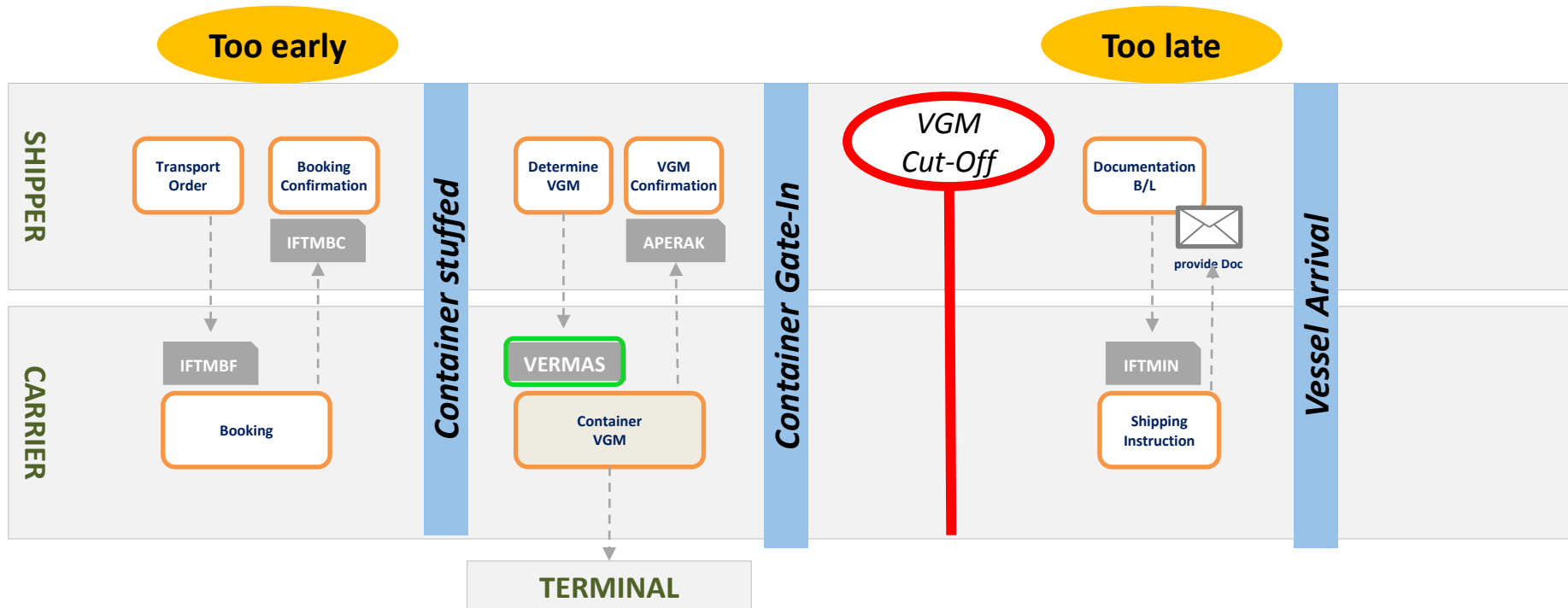
## What will the carrier do with the VGM?

1. The carrier will assign the VGM to the correct booking and capture it in his IT system. He will use it for the stowage planning.
2. The carrier will forward the VGM **to the terminal**.
3. The carrier cannot and will **not check** or verify the VGM. He has no policing function.
4. The VGM will normally **not** be printed **on the B/L**.
5. The VGM will **not** be forwarded **to customs or any other authorities**.  
No such requirement is known so far.
6. In case of a Port State Control or in case of a possible incident, the carrier might be asked by authorities to reveal the responsible party to the competent authorities.

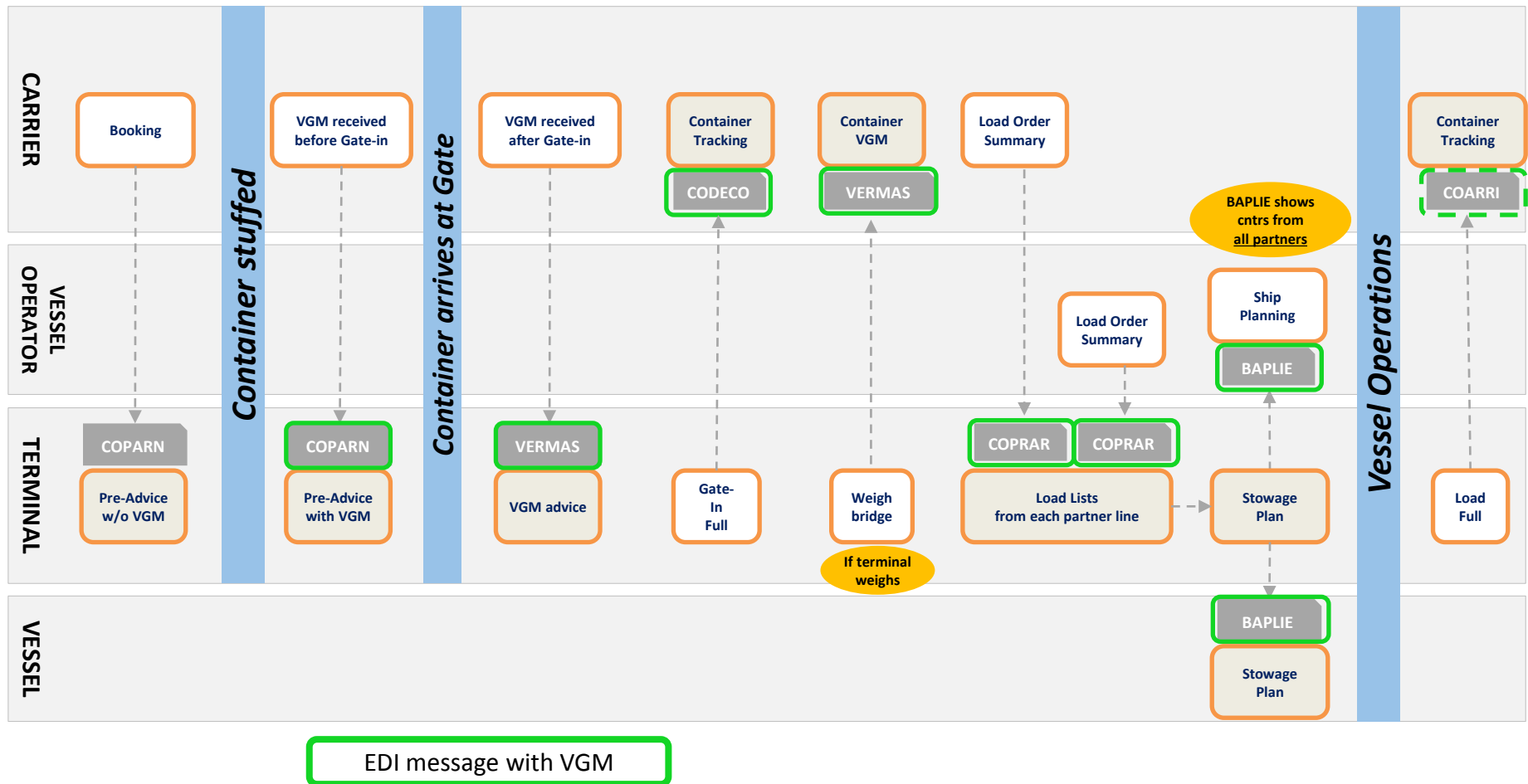


## Typical message flow Shipper - Carrier

- The booking (IFTMBF) is too early. The container is not yet stuffed.
- The Shipping Instructions (IFTMIN) often come too late, sometimes even after vessel departure.
- And the **VGM** is **more time critical** than the Shipping Instructions!
- ➔ Therefore the new Edifact message **VERMAS**: Small and simple, only for VGM transmission.



## Typical message flow Carrier – Terminal - Vessel



## What is the VERMAS message ?

The VERMAS is a new developed UN/EDIFACT message. It is especially designed for the **purpose of VGM transmission**.

It is an offer to the trade, usage is facultative.

**It can be used by any party** in the transport chain if desired: By a shipper, a carrier, a terminal, a weighing station etc.

It's a very **small and simple** message format, only for the data needed for the VGM.

It has been developed by the **SMDG**. The VERMAS 0.4 Message Implementation Guide can be downloaded free from the SMDG website [www.smdg.org](http://www.smdg.org)

After approval by UN/CEFACT, the VERMAS message will be published on the **official UN/EDIFACT Repository** in June 2016.



*The VERMAS message enables the transmission of the VGM*

## Who is the SMDG?

**SMDG is a non-profit foundation, run by and on behalf of companies and organizations working in the maritime industry, like container terminals and ocean carriers**

**[www.smdg.org](http://www.smdg.org)**

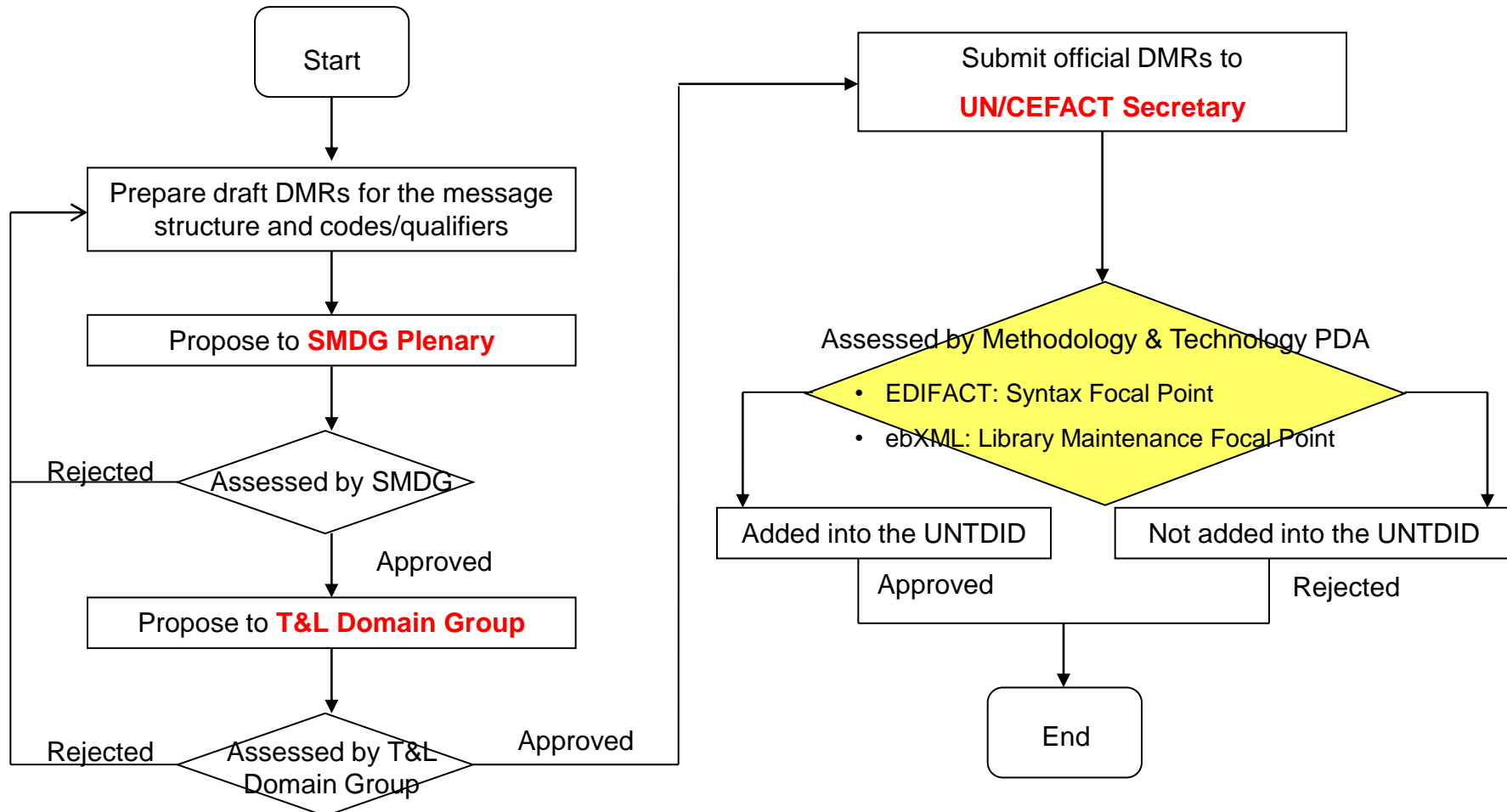


**SMDG develops, maintains and publishes EDI messages  
for the maritime industry since 1987.**

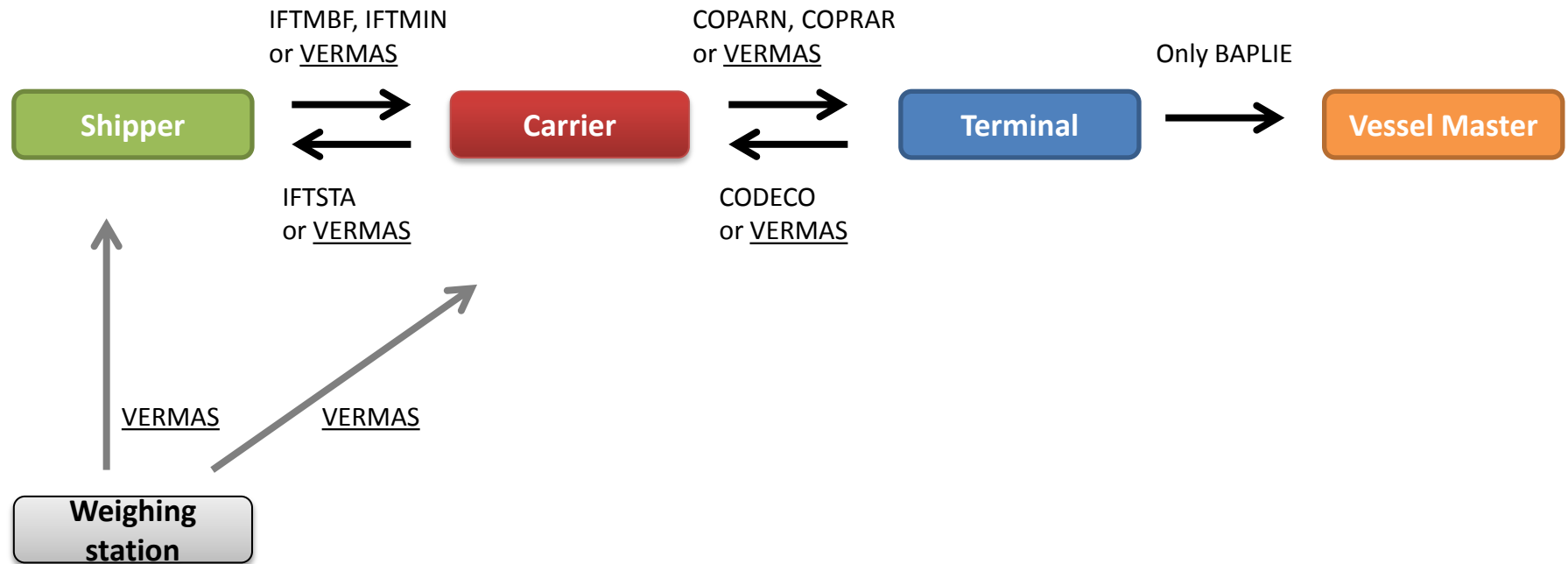
**SMDG is recognized by the UN/CEFACT.**



## Process diagram standards development SMDG – UN/CEFACT



## VERMAS in the Process Chain



### **SMDG Activities in the VGM context**

The structure of following messages is being enhanced by the SMDG in order to enable VGM reporting.  
New versions have been published on [www.smdg.org](http://www.smdg.org)

Message	Activity	Purpose	Sender-Receiver
BAPLIE	Enhanced	Stowage Plan	Carrier <> Terminal
MOVINS	No change	Move Instructions	Carrier > Terminal
COPARN	Enhanced	Pre-arrival notice	Carrier > Terminal
COPRAR	Enhanced	Load List	Carrier > Terminal
CODECO	Enhanced	Gate-In confirmation	Terminal > Carrier
COARRI	Enhanced	Load/Discharge	Terminal > Carrier
VERMAS	New development	VGM Reporting	Between various parties in the transport chain

# new Edifact Message VERMAS – Verification of Mass



USER GROUP FOR SHIPPING LINES AND CONTAINER TERMINALS

## **Scope of the new message VERMAS**

To transmit the verified gross mass (the weight) and all details of the related weighing certificate for a packed container including the name of the authorized person.

It is a legal requirement that all parties along the transport chain are informed about the Verified Gross Mass of the container:

Shipper, Carrier, Vessel Operator, Terminal and the vessel itself.



## **Different process steps**

Unlike other EDIFACT messages, the VERMAS is not dedicated to a certain process step in the transport chain. It can be used by different parties at different times in the process chain.

## **Not to use as an order**

The VERMAS purpose is only to report a weight that was determined earlier. It will *not* be used to *order* a service such as weighing a container. For the purpose of ordering services, for example the COHAOR should be used.

## Why a completely new message?

### **1. New processes**

There are new process steps that are not covered by existing message types. For example reporting from a weighing station to the shipper, or the weight from the terminal to the carrier or from the carrier to the shipper.

### **2. Different timing for weight transmission in current messages**

In many cases the existing messages are sent at a different time than the VGM is known or is required. The existing messages are sent too early or too late for transmission of the VGM.

### **3. One new message easier than changing many existing messages**

Shippers, carriers and terminals need to change a large number of message versions on a fixed deadline. Many of them find it easier to implement one new message for this special purpose of VGM reporting than upgrading many existing message versions and test simultaneously with many EDI partners.

### **4. Message identification determines the purpose**

The receiver can detect the purpose (VGM update) from the message identification VERMAS. He does not have to go into the message to detect the function.



## Use cases for the new message

Just examples – detailed list in the MIG

	Sender	Receiver	Purpose
1	Shipper or Forwarder	Carrier (Shipping Line)	<ul style="list-style-type: none"><li>• If the shipping instructions are sent too early, when the VGM is not yet known.</li><li>• If the shipping instructions are sent too late, when the container is already at the terminal.</li></ul> <p>➔ In these cases the timing of existing messages is not suitable.</p>
2	Carrier	Terminal	In cases where COPARN and COPRAR are not suitable for the terminal.
3	Weighing station	Shipper	<p>If the shipper ordered the weighing service.</p> <p>➔ New process, not covered by existing messages.</p>
4	Weighing station	Carrier	<p>If the shipper has authorized the weighing station to transmit directly.</p> <p>➔ New process, not covered by existing messages.</p>
5	Terminal	Shipper or Carrier	<p>If the terminal weighed the container upon arrival and determined a new VGM.</p> <p>➔ New process, not covered by existing messages.</p>

## Sender and Receiver of the new message

### Sender

The party who has knowledge about the verified gross mass. This can be for example:

- a) The shipper who has stuffed the container and verified the gross weight.
- b) The operator of a weighing facility who has determined the VGM for the packed container.
- c) The vessel operator or the terminal who forwards the VGM to another party in the transport chain.

### Receiver

The party who requires the verified gross mass. This can be for example:

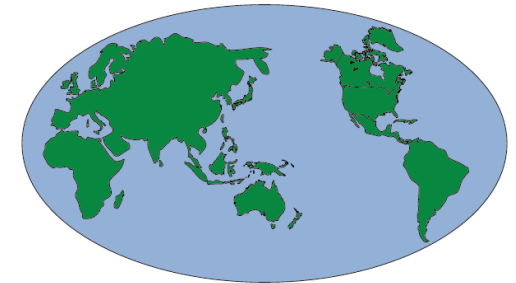
- a) The party who has ordered the service of weighing the packed container.
- b) The forwarder, or the carrier, or the terminal

*The VERMAS message is an offer to the maritime industry .  
Its usage is optional and is left to agreements between the trading partners.  
They may also decide to use the enhanced versions of IFTMIN, COPRAR, CODECO etc for VGM transmission*

## Who supports the development and implementation of the VERMAS?

As per status of April 2016, it appears that the **VERMAS will become the world standard** for transmission of VGM. Parties that are preparing to implement the VERMAS include:

- All shipping lines that are participating in the SMDG
- Most of the shippers and forwarders will send the VERMAS
- Many container terminals prepare to receive the VERMAS
- Big portals like INTTRA or DAKOSY will receive and send the VERMAS
- Stationary and mobile weighing facilities will send the VERMAS



In addition the WSC World Shipping Council supports and promotes the VERMAS as the electronic medium to transmit the VGM and thus enable the SOLAS implementation.

The shippers, booking portals and weighing facilities are not members of the SMDG but they welcome the new message to cover the legal requirements.

## Content of the VERMAS message – in a nutshell

### Mandatory for VGM to the carrier:

- The unique **container ID** (e.g. HLXU1234567) and ISO size/type.
- The **Verified Gross Mass** in kilogram or lbs.
- The **identity of the message sender**
- The **identity of the Shipper** (SOLAS responsible party)
- The name of the **authorized person** in capital letters, as electronic equivalent of the signature.

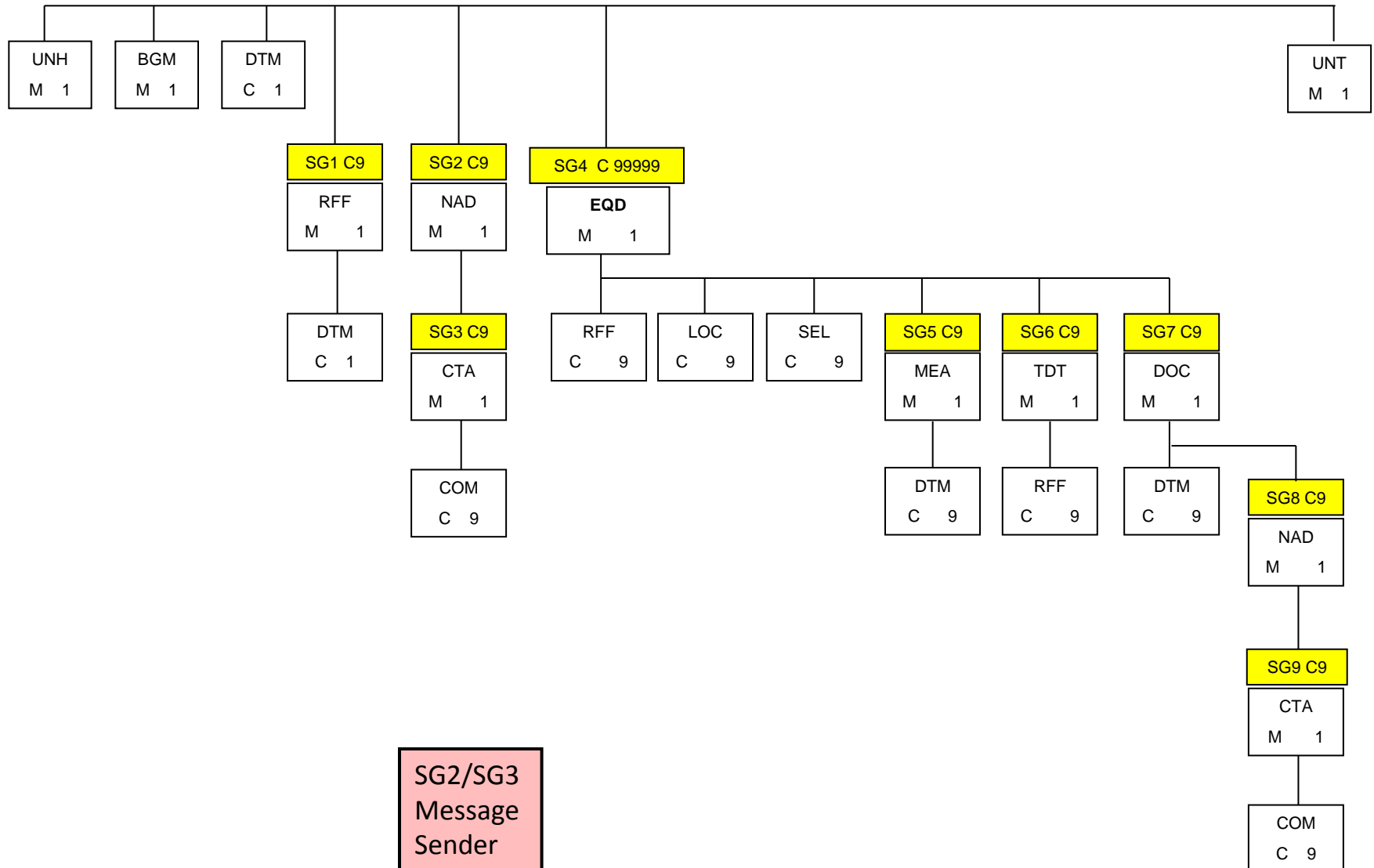
### Optional:

- All **details** that a paper **certificate** would show: date and place of weighing, the weighing company, method used (1 or 2 according to SOLAS), reference number etc.
- Reference to a particular **transport order or purchase order**, by means of booking number, B/L number, port of loading, port of discharge, vessel name, voyage number etc.
- Related **transport parties**: Shipper, carrier, terminal, weighing facility etc.
- Seal number

# new Edifact Message VERMAS – Verification of Mass



USER GROUP FOR SHIPPING LINES AND CONTAINER TERMINALS



**SG4**

**EQD** – Container ID and Sizetype

**RFF** - Booking No *OR* Bill of Lading *OR* Shipper's reference

**LOC** – POL *OR* POD *OR* Final Destination etc.

**SEL** – Seal number

**SG5 MEA** – Verified Gross Mass and Unit

**DTM** - Date of Verification or Weighing

**SG6** – Vessel Names / Voyage Numbers for *this* cntr.

**SG7**

**DOC** – Method of verification and Certificate ID/reference

**DTM** – Dates referring to the weighing document,  
*e.g. issue date of the weighing certificate*

**SG8/SG9**

**NAD** – Party that has verified the weight and issued the certificate.

**CTA, COM**

- Name of the Responsible Person, belonging to that party.
- Contact information



## Example VERMAS message

Example VERMAS message from a shipper to a carrier (shipper sends the message)

```
UNB+UNOC:3+SUBMITTER_ID+RECEIVER+160601:1430+100'  
UNH+80+VERMAS:D:16A:UN'  
BGM++8394887+9'  
DTM+137:201606011430:203'  
EQD+CN+HLCU1260179+22GP+1'  
RFF+BN:90300221'  
SEL+XYZ12345+SH  
MEA+AAE+VGM+KGM:13300'  
DTM+798:201607010830:203'  
NAD+SPC+800372::86++RESPONSIBLE PARTY NAME+STREET  
AND NUMBER+PARIS++75007+FR'  
CTA+RP+:VICTOR HUGO'  
COM+309 229 8828:TE'  
UNT+9+100'
```

Sender / Receiver

Message name

EDI Reference

Date of sending

Container and Size Type

Booking number

Seal number

VGM (Gross weight)

Date of weighing

Responsible party (SOLAS Shipper)

name and address

Authorized Person name („signature“)

Authorized Person phone number

Message trailer

## MIG versus Message Structure

We need to differentiate two levels:

- The **UN/CEFACT** approves and publishes the **Message Structure** only.

The message structure consists of segments, groups, optionalities, cardinalities etc. All this is already reflected in the current MIG on the SMDG website.

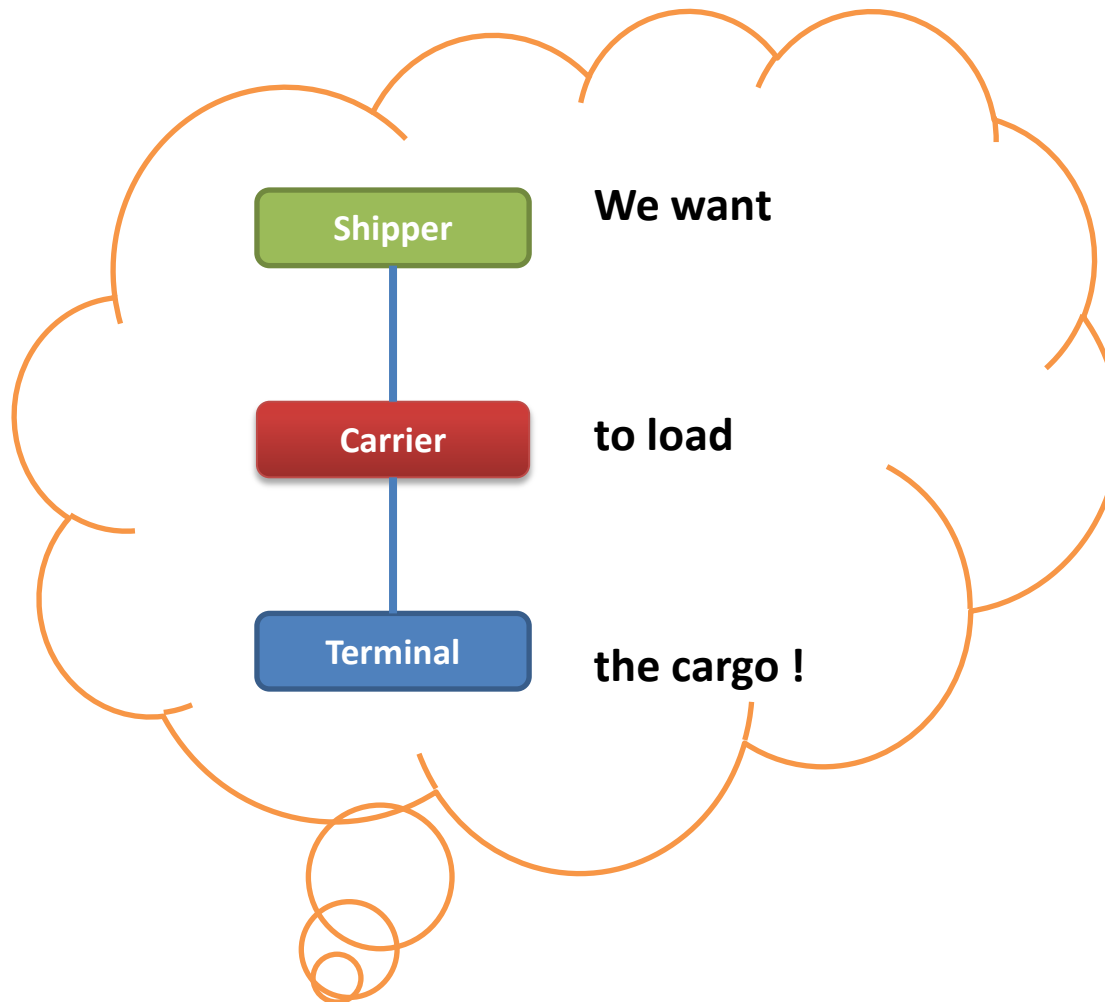
- The **SMDG** publishes a Message Implementation Guide (MIG).

The MIG contains much more details than the message structure: Explanations to the usage of segments and qualifiers, example message for use cases etc.

## VERMAS Timeline

1.4.2015 SMDG Meeting in Malmoe	Agreement to pursue the development of a new message
<b>1.7.2015 T&amp;L Group interim meeting in Paris</b>	<b>T&amp;L Group within UN/CEFACT agrees and supports the development of a new Edifact message for VGM</b>
21.9.2015	DMRs for new codes submitted to UN/CEFACT for <b>D.15B</b>
30.9.2015 SMDG meeting in Malta	Proposal for VERMAS message was approved
<b>4.11.2015 UN/CEFACT Forum Marseille</b>	<b>General approval for VERMAS message structure</b>
6.11.2015	SMDG publishes first VERMAS MIG as version 0.4
11.2.2016	<b>UN/CEFACT project proposal supported by 3 national HoD</b>
26.2.2016	SMDG provides VERMAS Boiler Plate for D.16A to UN/CEFACT
8.3.2016	SMDG provides the BRS for the VERMAS message
20.4.2016 SMDG Meeting in Copenhagen	Prepare for next VERMAS MIG version 1.0
<b>25. - 29.4.2016 UN/CEFACT Forum in Geneva</b>	<b>Final VERMAS approval by UN/CEFACT</b>
May / June 2016	UN/CEFACT publishes VERMAS in D.16A directory

We all share the same goal:



# Electronic VGM transmission

Backup

## Which data is required for VGM transmission?

Page 1/2

The VERMAS message can transmit **mandatory and optional** data elements. Depending on who is the sender of the message, the requirements are different.

**From a shipper to a carrier:**

Reference	Data elements	Remarks	Mandatory/optional
Message sender			mandatory
Shipper	Company name and address. Identification by Tax number, EORI number etc. is possible if agreed	Responsible party for VGM as per SOLAS	mandatory
Authorized Person	Person authorized by the shipper to sign the VGM document	Full name in capital letters, contact details (mail, tel.)	Full name mandatory, contact details recommended
Transport Order Reference	Carrier's booking number or B/L number		Highly recommended to avoid delays
Container number			mandatory
VGM	Verified gross mass of the container incl. unit of measurement	KGM	mandatory

# Electronic VGM transmission



Backup

Which data is required for VGM transmission?

Page 2/2

Reference	Data elements	Remarks	Mandatory/optional
Date+Time of weighing	Date + Time when the container was weighed or the weight was determined		Recommended
Place of weighing	Location where the container was weighed or the weight was determined.	At minimum the country of weight determination should be transmitted.	Recommended
Seal number			Optional
Method of weight determination	SM1 or SM2	SOLAS method 1 or 2	Optional
Weight certificate	Unique reference for a weight certificate	E.g. for a weighing slip	Optional