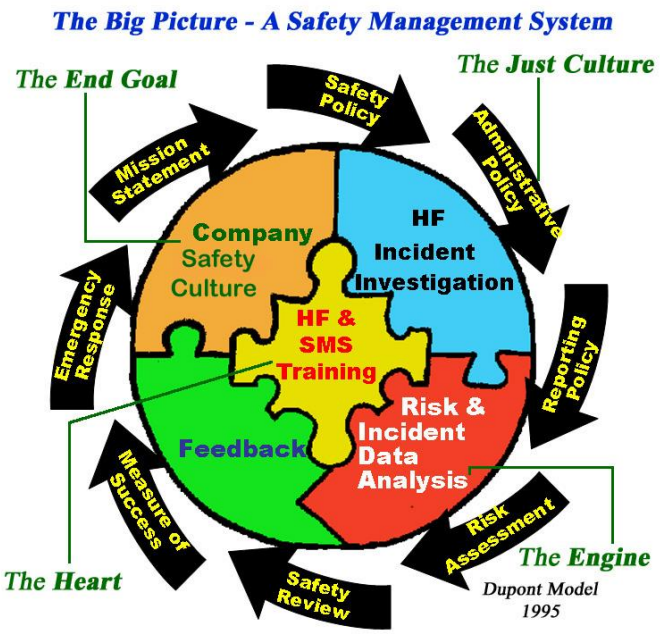

This **Safety Management System (SMS)** thing! Is it the "best thing since sliced bread" or is it just "another bureaucratic time wasting pain in the …backside?" It can be either depending on what and how you implement it.

We will be using the model on the left that was developed in 1995 and called "The Big Picture", for want of a better name at the time. The objective is to provide you with the knowledge to enable you to see that, done right, this SMS really is much better than sliced bread as it will serve to improve your Safety culture, save money, improve morale and thus, productivity. Sound good? Let's start with a little history.

In 1947 the International Civil Aviation Organization (ICAO), a branch of the United Nations, was formed. It had as its mandate to set standards and make recommended practices to enhance aviation Safety. All contracting states are expected to follow these practices or file a difference. Instead of Chapters ICAO has Annexes instead. The origin of your AMT/AME license can be found in Annex One, while as an accident investigator, I had to understand Annex 13. We had to know if a Chinese registered aircraft full of Japanese tourists crashed right on the border of Canada and the United States, who would investigate and where would you bury the survivors? Not everyone can answer that.

In 2006 ICAO issued a Safety Management Manual (Document 9859) to the regulatory bodies of all 150 plus contracting states. This 290 page document spelled out the basics of a Safety Management System that all member states were expected to implement or file a difference. Many member states had already mandated the requirement for a SMS to its airlines (Canada and Australia being among the first) and most also had at least parts of an SMS already functioning. Thus, a "gap analysis" could be carried out to determine what work needed to be carried out to be in full compliance.

In 2013 SMS earned its own Annex as it became Annex 19 with a much more manageable 44 page document. SMS is here to stay.

The original four SMS pillars were: 1) Safety policy and objectives, 2) Safety Risk Management, 3) Safety Assurance, and 4) Safety promotion. They are now called components or framework components. I believe that a rose by any other name is still a rose so call them what you want, but they are a must in a SMS.

There are a lot of explanations as to what an SMS is. I say that it is: **a formal, systematic, error reduction, accident prevention program that manages the Safety risks through all aspects of the company.**

What it is intending to do is to provide a framework to guide an organization toward a true Safety culture. If you aren't sure what a Safety culture is, please go back over the last two issues. There you will learn what a true Safety culture is and what your role is in it.

In its simplest terms I say that SMS is putting a program in place that "sweats the small stuff (hazards and their risks to Safety) so you never have to sweat the big stuff" (major accidents that can end in multiple fatalities and even the failure of the organization). It sounds simple enough, but how do you do it?

The model has puzzle pieces because, in my humble opinion, most companies are already doing parts of the puzzle to some degree and SMS serves to bring these parts together. So let's take a quick look at these pieces and their accompanying arrows.

The "**Human Factors and SMS Training**" module is in the center of the model and is the only piece that interconnects with all the other pieces. It is the heart of the model as it: a) trains everyone to understand why errors are made and how to avoid making them, and b) trains everyone on the importance of SMS and their role in making it succeed. This module should be one of the first to be implemented as it will assist with the other puzzle pieces fitting together.

The **Human Factors Incident Investigation** calls for looking beyond the person to determine the root causes of an incident. This will require a "Just Culture" policy to be in place. (Go back to the March 2015 article

for a review of Just Culture if you don't recall what it is) This important piece ensures that when an error occurs, the "guilty party" will assist in the investigation knowing the person will be treated fairly and the end result is a "learning outcome" instead of "find the guilty party and punish them so they won't do it again" syndrome. With time and the building of trust, the investigations can take place to analyze reported near misses." These tie in with the next module.

The **Risk and Incident Data Analysis** module is the engine that drives the SMS. Here is where the managing of potential risks takes place. Finally we are becoming proactive and not waiting for an incident/accident to occur before learning how to prevent a future one.

Risk and Incident Data Analysis are important enough to deserve an article of their own but it is here that hazards and potential hazards, some that the organization may have functioned with for years, are analyzed for risk. Ways to eliminate or at least mitigate the risk are considered and acted upon. Data analysis is carried out to determine the level of risk to hazards that continue to reoccur. Finally, Safety is coming to the forefront in a proactive and even predictive fashion.

Feedback is a very important module in any SMS and one that is all too often neglected. I have met people who have gone to considerable trouble to submit a Safety concern only to have it, as he put it: "disappear into the black hole." It doesn't take long before there are few, if any, reports to analyze and the system is back to where it used to be. Management feels the system is working great with no reports until there is an accident to bring a known hazard to light. This module is one that many companies are weak at and yet it is vital for the success of any SMS.

The **Company Safety Culture** is the end goal and SMS is the mechanism to help you get there. It is hard to measure but you sure know it when you work in it. As this was covered in the past two issues, let's look at the arrows that circle this model.

A **Mission Statement** should spell out why an organization exists. It is very important for two reasons.

1. It informs the outside world about what it is your organization does and how it intends to do it. **(Important)**

2. It informs the inside world about what their organization does and how they should be doing it. **(VERY Important)** Today, ALL organizations of any size must have a **Mission Statement** and as a high consequence industry it should have the word Safety in it. This statement should be displayed everywhere and all employees should know it.

A **Safety Policy** is every bit as important to a modern organization as a Mission Statement. It is a MUST for a Safety Management System and will be the document that the SMS will evolve from. It should state everyone's responsibilities toward Safety and include a "just culture" paragraph outlining that all incidents/accidents will be treated as learning outcomes with only agreed upon "reckless error" meriting possible discipline. This policy, like the Mission Statement, should be seen everywhere.

The **Administrative Policy** is where the "just culture" and what constitutes reckless error resides. Have a review of the March 2015 issue for more detail on this important document.

The **Reporting Policy** spells out once more that anything reported will not incur discipline except in cases of reckless error. It should state that it is everyone's duty to report what they believe to be hazards. (anything that could cause us grief) I strongly suggest that ANY hazard be reported and H&S can be separated after if necessary. This encourages reporting and results can be seen for the small stuff.

Risk Assessment is where the real work gets done and will be the subject of the next article.

A **Safety Review** is one of the 4 pillars and is a requirement to know just how well your SMS is working. One way is to ask the employees with a carefully worded survey. Outside help is also a useful tool.

A **Measure of Success** calls for Safety goals to be set and met. Zero error is not a Safety goal as it is not realistic. Keep it simple like: to reduce human errors by 25% over three years. Be sure everyone knows the goal and provide multiple progress reports.

Finally, an **Emergency Response Plan** (ERP) is required that covers any situation that will require a major response. This is a document that you hope that you will never need, but we humans are genius at finding ways to make that intentional costly error. We'll look at Risk Assessment in the next article as the tool to help prevent the need for the ERP.