Mr Compton qualified as a social worker in 1976 and held a series of practitioners posts in mental health, family and child care in east and west Belfast. In 1980 he became head of social work in the Royal Victoria Hospital. During that period social work in the Adult, Children's, Maternity and Elderly hospitals merged into one site wide department. In 1985 he moved to a principal social work post in south Belfast and became Assistant Director of Social Services with the Eastern Board in 1988 with specific responsibility for Mental Health and Learning Disability Services.

With the introduction of general management in 1990 he moved to Down Lisburn Trust first as a Director and Deputy Chief Executive in 1995. In 2001 he became Chief Executive a post he held until 2006 when he became Chief Executive of the South Eastern Trust. In 2005-2006 he was temporarily seconded to Sperrin Lakeland Trust. With the creation of the Regional Health and Social Care Board in 2009 Mr Compton moved to that position, the post he now holds. It is the organisation which commissions health and social care services for the NI population.

A graduate of QUB and UU Mr Compton has also attended senior management training in London at the King's Fund and USA at the US government school in Charlottesville, Virginia.